A STUDY OF THE LEVEL OF PARENTAL INVOLVEMENT IN THE EDUCATION AND MANAGEMENT OF MENTALLY RETARDED CHILDREN AND ITS RELATION TO THEIR ATTAINMENT IN CERTAIN BASIC SKILLS

By

Dr. (Prof) MERCY ABRAHAM

Principal Investigator, ERIC Project
Department of Education
University of Kerala
TRIVANDRUM

Project Report submitted to ERIC (NCERT), New Delhi
1994

Dr. (Prof.) MERCY ABRAHAM
Principal Investigator, ERIC Project
Department of Education
University of Kerala

DECLARATION

I, Mercy Abraham do hereby declare that this project report, "A Study of the level of Parental Involvement in the Education and Management of Mentally Retarded Children and its relation to their attainment in Certain Basic Skills" is a record of bonafide research study carried out by me.

31/10/94.

Trivandrum-14,
31 October, '94.

Dr. (Prof.) Mercy Abraham

CONTENTS

ACKNOWLEDGEMENT

LIST OF TABLES

LIST OF APPENDICES

SECTION PAGE

1. INTRODUCTION 1

2. STATEMENT OF THE PROBLEM AND OBJECTIVES OF THE STUDY 7

3. HYPOTHESES OF THE STUDY 9

4. REVIEW OF RELATED LITERATURE 11

5. METHODOLOGY 21

6. ANALYSIS AND DISCUSSIONS 28

7. MAJOR FINDINGS 67

8. IMPLICATIONS AND LIMITATIONS OF THE STUDY 77

BIBLIOGRAPHY

APPENDICES

ACKNOWLEDGEMENT

This study is a genuine outcome of the investigator's zest to work for the cause of Mental Retardation. In this endeavour, the investigator had been helped very generously by several people and agencies to whom her indebtedness is duly acknowledged. Though it is difficult to list down individually the names of all those who have co-operated with the study, the investigator would wish to place on record the names of the following:

(1) ERIC (NCERT), New Delhi for sanctioning the fund needed for the execution of the study, without which the investigator's dream of such a study would never have come true in this form. Special thanks are due to the Member Secretaries of ERIC, who were in charge of the project, for their kind co-operation (Ref: M.S. (ERIC) Note No.F.2-24/ERIC/90 dated 7-1-1991).

(2) Dr. (Prof.) N.K. Jangira, Head of the Department of Special Education, NCERT, New Delhi deserves my special thanks in this context. It was at a workshop held at CASE, Baroda, for which Prof. Jangira was mainly responsible, that the proposal of this project work was submitted and later accepted by the ERIC, sanctioning the entire fund needed for the conduct of the project. Prof. Jangira had been a great source of motivation for me in undertaking the project work and I thank him profusely for it.

(3) The University of Kerala for its role as a parent institution which facilitates the execution of project works of this type. Special thanks are due to all the officers and assistants in the concerned sections of the university, who had been very helpful and co-operative throughout the execution of the study.

(4) The Head of the Department of Education, University of Kerala and my colleagues in the Department had been very encouraging and co-operative throughout the completion of the project. My sincere thanks to them.

(5) Smt. Jolly Mathai, Junior Project Fellow (JPF) of this project, had been very enthusiastic in the execution of the project. Special thanks are due to her for the untiring efforts she put in the completion of the project work. The field workers also deserve my special thanks for their uncomplaining nature and sincere co-operation in the gigantic task of data collection, particularly from the parents of the mentally retarded children. There were difficult times when we were going ahead with the hectic work at hand and the resulting tension. But the JPF and the field workers were very understanding and co-operative for which I thank them whole-heartedly.

(6) The principals and teachers of the institutions for the mentally retarded children in Kerala need to be thanked in a special way for their unstinted co-operation for the conduct of the study. My sincere thanks are due to them.

(7) The mentally retarded children and their parents also deserve my special thanks for their co-operation throughout the entire study. My heart-felt thanks to them.

(8) The library staff of the University Departments of Education, Psychology, Kerala University Library and the Central Institute for Mental Retardation, Jagathy, Trivandrum have extended whole-hearted co-operation in locating the reference materials for the study. I thank all of them for their kind gesture.

(9) My research students in the Department of Education, University of Kerala who had been a real source of strength and support in the completion of the project work. I thank each one of them abundantly.

(10) The typist who has typed the entire material for the draft and final report of the project also deserves my special thanks and I offer her the same in abundance.

(11) Finally my husband and children for tolerating my lack of involvement in family matters during the execution of the project work. My heart-felt thanks are due to them for their patience and co-operation, besides the help offered in different forms during the difficult moments in the execution of the study.

Besides, there are many friends and well-wishers who have contributed directly or indirectly, in one form or the other, for the successful completion of the project. I assure them that I do remember vividly their kind gesture and I thank each one of them for their timely help and co-operation.

(Dr. MERCY ABRAHAM)

LIST OF TABLES

Table No. | Page No.

1. Details of the sample of MR children under study. 23

2. Details of the sample of Parents under study. 23

3. List of Institutions for the MR children in Kerala selected for the study. 24

4. Classification of High, Average and Low Parental Involvement Groups. 31

5. Level of Attainment in Self-care skills of MR children in Kerala. 32

6. Level of Attainment in Reading skills of MR children in Kerala. 33

7. Level of Attainment in Writing skills of MR children in Kerala. 33

8. Level of Attainment in Arithmetic skills of MR children in Kerala. 34

9. Level of Attainment in Communication skills of MR children in Kerala. 34

10. Level of Attainment in Social skills of MR children in Kerala. 35

11. Summated form of the Level of Attainment of MR children in the six basic skills under study. 37

12. Comparison of Male and Female MR children: Attainment in self-care skills. 39

13. Comparison of Male and Female MR children: "Attainment in Reading skills". 39

14. Comparison of Male and Female MR children: Attainment in Writing skills. 40

Table No. Page No.

15. Comparison of Male and Female MR children: Attainment in Arithmetic skills. 40

16. Comparison of Male and Female MR children: Attainment in Communication skills. 41

17. Comparison of Male and Female MR children: Attainment in Social skills. 41

18. Association between Parental Involvement and Attainment in self-care skills of MR children in Kerala: X^2 test of significance. 45

19. Association between Parental Involvement and Attainment in Reading skills of MR children in Kerala: X^2 test of significance. 46

20. Association between Parental Involvement and Attainment in Writing skills of MR children in Kerala: X^2 test of significance. 47

21. Association between Parental Involvement and Attainment in Arithmetic skills of MR children in Kerala: X^2 test of significance. 48

22. Association between Parental Involvement and Attainment in Communication skills of MR children in Kerala: X^2 test of significance. 49

23. Association between Parental Involvement and Attainment in Social skills of MR children in Kerala: X^2 test of significance. 50

24. Influence of Parental Involvement on Attainment in Self-care skills of mildly retarded children. 52

25. Influence of Parental Involvement ~~and~~ on Attainment in self-care skills of moderately retarded children. 53

Table No. Page No.

26. Influence of Parental Involvement on attainment in self-care skills of severely retarded children. 53

27. Influence of Parental Involvement on attainment in Reading skills of mildly retarded children. 55

28. Influence of Parental Involvement on attainment on Reading skills of moderately retarded children. 56

29. Influence of Parental Involvement on attainment on Reading skills of severely retarded children. 56

30. Influence of Parental Involvement on attainment in Writing skills of mildly retarded children. 58

31. Influence of Parental Involvement on attainment in Writing skills of moderately retarded children. 58

32. Influence of Parental Involvement on attainment in Writing skills of severely retarded children. 59

33. Influence of Parental Involvement on attainment in Arithmetic skills of mildly retarded children. 60

34. Influence of Parental Involvement on attainment in Arithmetic skills of moderately retarded children. 61

35. Influence of Parental Involvement on attainment in Arithmetic skills of severely retarded children. 61

36. Influence of Parental Involvement on attainment in Communication skills of mildly retarded children. 63

37. Influence of Parental Involvement on attainment in Communication skills of moderately retarded children. 63

Table No. Page No.

38. Influence of Parental Involvement on attainment in Communication skills of severely retarded children. 64

39. Influence of Parental Involvement on attainment in Social skills of mildly retarded children. 65

40. Influence of Parental Involvement on attainment in Social Skills of moderately retarded children. 66

41. Influence of Parental Involvement on attainment in Social skills of severely retarded children. 66

42. Classification of Parents into High, Average and Low Parental Education Groups

43 Comparison of the 'level' of attainment of MR children of High and Low Parental education groups : Data and Results of the test of Significance.

44 Information about the training given to the parents in handling their MR children

LIST OF APPENDICES

1. Parent Involvement Scale
2. Manual of Directions for Parent Involvement Scale
3. The Basic Skills Attainment Test (BSA-Test) for Mentally Retarded Children
4. Manual of Instructions for BSA-Test.
5. General Data Sheet for Mentally retarded children.
6. General Data Sheet for Parents of Mentally retarded children.

……

1 INTRODUCTION

The education of children suffering from different kinds of handicaps has become a major area of concern of educators and policy makers in education of the country. This area of education assumes greater significance in the light of the fact that our educational policy stresses the need for equal access to education for all groups, including those belonging to the weaker sections of the society and those suffering from physical, intellectual, emotional and social handicaps of various kinds. A government committed to a democratic philosophy ensures education and care for all. That is why the Government of India, as a national policy, is committed to the welfare of children who are in need of special care and education.

Among the children who are in need of special care and education, the mentally handicapped group deserves more care and attention, since mental retardation is one of the most challenging problems of childhood. It affects not only the child, but also his parents, his siblings and the community at large. Until recent times, the mentally retarded (abbreviated as MR) have remained the most ignored, neglected and least regarded of all children. They are not only

victims of their fate, but also indifference of family and community. Many people tend to forget the fact that mental deficiency is not a disease or a single 'entity', rather it is a term applied to a condition of subnormal mental development, present at birth or in early childhood and characterised mainly by limited intelligence. Several research studies as those of Collie (1943), Solnit & Stark (1961), Olshansky (1962), Pinkerton (1970), McKeith (1973), Wickler (1981) and Hawkes (1992) show that a vast majority of the parents have some form of guilt, shame, chronic sorrow, frustration, tension, rejection and denial or other forms of emotional disturbance, due to the limited abilities of their child to adjust to the demands of the society.

The fact that parents have a decisive role in educating the mentally retarded, sharing a co-equal or even a greater responsibility than their teachers, is not often properly realised. As a result, often, parents either shy away from their responsibility of providing the supplementary educational treatment in the alibi that it is a specialised task beyond their ability, or totally neglect their responsibility for attending to the retarded children, passing on all responsibilities to institutions and the special teachers in these institutions. Even those parents who are willing to extend help to their children who are normal are

unwilling to perform the same responsibility towards their mentally retarded children. The picture becomes more complex, when the retarded child manifests other psychological problems like aggression, makes irrational demands, assaults others etc. (Grebler: 1952; Baum: 1962; Farber: 1968; Justice et al; 1971; Dharap: 1986; Latha: 1985; Narayan: 1993). Thus, when a mentally retarded is also a deviant in behaviour, the parents are less willing to bestow any attention on him/her, where as, it is in such a situation that parental care is needed the most. The observation of Abel, a veteran in the field, is most pertinent in this context: "The mentally retarded is a deviant, who is perhaps treated with greater rejection and less respect by parents, teachers, and the community than any other deviant (cited in Weber: 1963). When institution and teachers, and the community reject, the mental retardates, whatever be the degree or nature of their deviance, the compensation of such neglect will have to come from the parents, who obviously have the greatest interest in helping them in their development.

If parents do not show any personal interest in the proper development of their children, and if they are not performing their responsibility by way of helping their children's education, it is mainly because of wrong conception or distorted conception of the education of the mentally retarded, often arising from a feeling of utter helplessness

and deep frustration (Gallagher: 1956; Dimicheal: 1962; Kroth: 1975; Mattson: 1977; Lunt: 1986). But, if, on the other hand, the parents are educated as to the crucial role that they can play in developing the educational skills of their children or in providing some of the essential skills which will make their lives better, this will give them hope and motivate them for appropriate action. When the mother or the father or both parents are made aware of their critical role in developing the basic skills, whether it be the three R's or aspects of self-care, it will merely ensure better involvement and ~~spare~~ spur them to more effective action. The parents have to be educated in the exact manner in which they can help their children.

In educating the parents about the role they have to play in the education of the retarded children, the negative effects of the deprivation of parental care should also be made clear to them. Earlier studies as those of Spitz (1945), Bowlby (1951, 1968), Bower (1958) and later studies as those of Love & Kaswan (1974), Lugo & Hershey (1981), Abraham (1984), Kaushik (1988) and Arjunan (1994) clearly indicate that deprivation of maternal love and security adversely affect the intellectual, social, physical and mental functioning of the individuals. Moreover, the child's needs and problems must be considered in relation to his/her environment - his family, his community and culture. Of these interacting

forces, the child's relationship with his family has the greatest significance and therefore, parents need to understand that their responsibility to the child comes first, regardless of his physical or mental condition.

Contrary to what is expected, many of the parents of the mentally retarded children keep themselves away from the scene, leaving the sole responsibility of the education and management of the disabled child with the teachers and the school. Such parents need to be properly educated about the negative effects of the deprivation of parental care. The disinformation or misinformation that reaches the parents of mentally retardates is much higher in India than in more educated communities of the west. As such, the parents need to be provided correct information about their children's actual condition. Parents should be made to realise that mental subnormality is not exclusively a medical problem. It is, in fact, an educational, psychological and social problem. Parents should be aware that the "treatment" for the mentally subnormals is stimulation and education from the earliest possible moment to develop to the possible utmost, their limited potential. Parents should also realise that mental ability grows when nourished by love, care and appropriate training. It is to check any further deterioration from neglect, that parents of mentally subnormals have to be incorporated in the training of mentally subnormals.

The parents of young subnormal children should definitely be involved since intelligence can be sharply affected in the environment of the child during early childhood if the first five formative years remain devoid of stimulation.

Empirical studies as well as the theoretical approaches to the care of the retarded clearly indicate the possibility that by ensuring greater parental involvement in the education of the mentally retarded, it is possible to increase several-fold the educational outcomes (Zeaman & House: 1963; Kramm: 1963; Brophy: 1970; Wiegerink & Parish: 1976; Ronade: 1977; Yoshida et al.: 1978; Baig: 1983; Merlene: 1985; Mark: 1985; Beenakumar: 1991). Many believe that the effect of parental involvement can be increased still further by ensuring a scientifically defined system of parental intervention, in addition to the conventional type of educational care.
But some of the veteran practitioners in the field of mental retardation like Felix (1989, p.22) do argue that too much parental involvement would result in making the child too dependent on his/her parents. The present investigator who has long experience as a university teacher and a researcher handling significant areas in Educational Psychology, including special education, was amply motivated to take up a research study to verify the validity of the above arguments. The provision for getting financial assistance from NCERT (ERIC), New Delhi for a project in special education enabled her to crystallise her long-cherished ambition to take up

a study of the present type on a large scale. It was, therefore, decided to design a study which would attempt to assess the level of parental involvement in the education and management of mentally retarded children and to study its relation to their attainment in certain basic skills like self-care, reading, writing, arithmetic, communication and social management. It is hoped that the findings of the study would throw more light on some of our assumptions about the education of mentally handicapped children and would help in bringing about positive and constructive changes in the formulation and implementation of programmes for the education of the mentally handicapped in our country, ensuring adequate parental involvement in such programmes. Hence the need and importance of the present study.

2. Statement of the Problem and Objectives of the Study

The problem for the study is entitled as "A STUDY OF THE LEVEL OF PARENTAL INVOLVEMENT IN THE EDUCATION AND MANAGEMENT OF MENTALLY RETARDED CHILDREN AND ITS RELATION TO THEIR ATTAINMENT IN CERTAIN BASIC SKILLS."

The study had the following objectives in view:

2.1. To measure the level of Parental Involvement in the Education and Management of Mentally Retarded Children in the institutions for the mentally retarded children in Kerala.

2.2. To measure the level of attainment of Mentally Retarded Children in the following six basic skills:

- 2.2.1. Self-care skills. 2.2.2. Reading skills.
- 2.2.3. Writing skills. 2.2.4. Arithmetic skills.
- 2.2.5. Communication skills.
- 2.2.6. Social skills.

2.3. To compare the male and female groups of Mentally Retarded Children with respect to their level of attainment in the six basic skills under study.

2.4. To find out the association between Parental Involvement and

- 2.4.1. Attainment in Self-care skills of mentally retarded children.
- 2.4.2. Attainment in Reading skills of mentally retarded children.
- 2.4.3. Attainment in Writing skills of mentally retarded children.

2.4.4. Attainment in Arithmetic skills of mentally retarded children.

2.4.5. Attainment in Communication skills of mentally retarded children.

2.4.6. Attainment in Social skills of mentally retarded children.

2.5. To study the influence of Parental Involvement on the attainment of each of the six basic skills under study with respect to the following three sub-groups of mentally retarded children:

2.5.1. mildly retarded children.

2.5.2. moderately retarded children.

2.5.3. severely retarded children.

2.6. To identify the level of Education of the parents of the Mentally retarded children under study.

2.7. To compare the level of attainment of mentally retarded children of High and Low parental Education groups with respect to each of the six basic skills under study.

2.8. To collect information about the training of parents in handling mentally retarded children.

3. Hypotheses of the Study

The hypotheses of the study are the following:

3.1. There is a low level of Parental Involvement in the education and management of mentally retarded children.

3.2. There is a low level of attainment of mentally retarded children in the six basic skills (Self-care skills, Reading skills, Writing skills, Arithmetic skills, Communication skills and Social skills).

3.3. A significant difference exists between the male and female mentally retarded children with respect to their level of attainment in each of the six basic skills under study.

3.4. The association between Parental Involvement and attainment in Self-care skills of mentally retarded children is significant.

3.5. The association between Parental Involvement and attainment in Reading skills of mentally retarded children is significant.

3.6. The association between Parental Involvement and Writing skills of mentally retarded children is significant.

3.7. The association between Parental Involvement and Arithmetic skills of mentally retarded children is significant.

3.8. The association between Parental Involvement and Communication skills of mentally retarded children is significant.

3.9. The association between Parental Involvement and Social skills of mentally retarded children is significant.

3.10. Parental Involvement influences the attainment of each of the six basic skills under study with respect to the following three sub-groups of mentally retarded children:

    3.10.1. mildly retarded children.
    3.10.2. moderately retarded children.
    3.10.3. severely retarded children.

3.11. The level of Education of the parents of the mentally retarded children is low.

3.12. A significant difference exists between mentally retarded children of High and Low parental Education groups with respect to their level of attainment in each of the six basic skills under study.

3.13. The training provided to parents in handling the mentally retarded children is inadequate.

4 REVIEW OF RELATED LITERATURE

The problem of mental retardation has been made the subject of study by a host of researchers all over the world like, Barr (1904), Tredgold (1937), Doll (1941), Kanner (1946), Levinson (1955), Sarason (1959), Kirk (1962), Robinson and Robinson (1965), Deb (1968), Cruick (1975), Udayashanker (1976). Research findings of several studies as those of Justice et al. (1971), Zeaman and House (1963) and Mahoney (1958) have indicated that the problem of mental retardation causes untold misery, suffering and emotional distress to the parents and other family members and care of those unfortunate children have a great bearing on the problem of their management.

Research has shown that the bonding between parents and children is frequently impaired when a child is handicapped; and that the incidence of child abuse is higher in families with a handicapped child.

Parental attitudes towards MR children

Various attempts have been made to study the reactions of parents to diagnosis of mental retardation of their children. The various reactions are guilt (Collie, 1943; Fenichel, 1945; Alford, 1955; Dalton and Epstein, 1963; Kramm, 1963; Roith, 1963; Wolfensberger, 1983), frustration (Grebler, 1952; Peek and Stephans, 1960; Wolfensberger, 1983), shame (Levinson, 1955; McKeith, 1973), ambivalance (Levinson, 1962; Schild, 1964), anger (Pinkerton, 1970; Wolfensberger, 1983), sorrow and grief (Solnit and Stark, 1961; Olshansky, 1961; Wikler, 1981). As Mc Andrew (1976) has rightly pointed out that initially many parents feel incompetent and frightened about raising a handicapped child.

Results of several research studies indicated that parents frequently lack a constructive attitude toward their exceptional child; usually they are over-anxious or over-protective (Grebler, 1952; Klebanoff, 1959;

Parmelee, 1959; Peek and Stephans, 1960; Thurston, 1960; Hersh, 1961; Roith, 1963; Latha, 1985; and Narayan, 1993). Case studies as those of Felix (1989) show that a dejected parent will only further retard the growth of a mentally retarded child.

Need for Parental Involvement

The need for parental involvement in the education and management of the mentally retarded children is emphasized by many as those of Chamberlian and Moss (1953), Gallagher (1956), Keam (1975), Kroth (1975), Mattson (1977), Barlett and Smith (1978), Bernal (1978) and Yoshida et al. (1978). The parents of the mentally retarded child have to play a key role in his overall growth and development.

Literature also indicates that parental involvement is important in the life of the mentally handicapped person (Casto et al., 1984), which in turn suggest that success in the care and rehabilitation of the handicapped depends on the extent of the parental involvement (Bradshaw, 1978; Bristol et al., 1982; Rian and Marble (1977). Various

attempts have been made to study factors that promote the healthy involvement of parents such as home environment (Kronick, 1977) good parent-teacher relationship (Kroth, 1975). While some recent studies, such as Lunt and Shepperd (1986) have shown the clear benefits of parental involvement, others, such as Tizard and Hughes (1984) have challenged such assumptions. A case study by Felix (1989, p.22) showed that how a family's over-abundant care had made. Latha, a 20 year old mentally retarded child, totally dependent and incapable of doing anything by herself.

Advantages of Parent Involvement

Experts such as Decker and Decker (1976), Brophy (1975), Honig (1979) and others have talked highly of this approach in the interest of a child's learning. Some of its advantages are listed here:

- The teachers benefit from direct assistance by parents. Parents can assist teachers in the gathering or making of instructional or play materials.
- Parents can serve as resource people and volunteers.
- Parents who participate in the programme are the most appropriate persons to convey information about programme services to other parents.
- Parents can profit from the educational expertise offered by resource personnel in the programme, in guiding their children in the home.

- Parent involvement helps to bridge the continuity gap that exists between school and home.
- Information of knowledge and skills enable parents to provide home practice opportunities for their children in many school-related activities. This is especially true of children who have problems regarding school studies.
- Meaningful participation in the educational activities contibuting to a child development has positive effects on parent personality. It helps parents to develop their own sense of self-worth and gives them new confidence.
- It also increases the child's educational achievements and helps him to develop wholesome attitudes towards the teachers and the programme.

In this regard, Brophy et al. (1975) expressed the view that parents can improve upon their existing skills in teaching their children. Deficiencies in child-rearing skills make children suffer. He has summarized the benefits very briefly but effectively in the following words; "Time spent working with parents may not only pay current dividends but also future ones as well."

Need for Parent training

Educational intervention programmes for infant and preschool age moderately and severely handicapped children generally include a parent training component; the parental application of early intervention techniques usually has produced amelioration of associated developmental deficits (e.g., Bereiter and Engleman, 1966; Karnes et al. 1968). Thus, there is indication that through appropriate home instruction parents can positively influence their children's development. Such interaction also can lead toward improved family adjustment and can facilitate normalization (Baker and Heifetz, 1976; Brophy, 1970; Denhoff and Hyman, 1976; Haynes, 1976; Wiegerink and Parrish, 1976).

Studies indicated the need of giving training to parents to develop new behaviours for their new roles as parents of a disabled child. The parents should be taught handling, stimulation, feeding, language discipline and socialising skills (Bernal and North, 1978; Balker et al., 1976; Barsch, 1968; Heifetz and Baker, 1975; Benassi and Benassi, 1973; Pascal, 1973; Denhoff and Hyman, 1976; Berkowitz and Graziano, 1972; Brickler, 1970; Hirsch and Walder, 1969; Salzinger et al., 1970; Kazdin, 1973; Hersh, 1961; O'Dell, 1974).

Obvious advantages of parent training are the following: such training saves the therapist's time and

generalization problem is directly by-passed from clinic to home as the parent, not the teacher, teaches the child. However, training the parents of mentally subnormal children could not have come into being unless direct behaviour modification had not already come into existence. Thus, direct behaviour modification studies constitute the context in which parents of mentally subnormal children have to be trained (Kaushik, 1988).

Parent training manuals have been produced at an increasing rate by behaviourally oriented authors seeking to meet the needs of the growing consumers of these materials. Topics of the manual range from general rearing of children to teaching of specific skills such as toilet training. These manuals usually provide extensive descriptions of procedures for systematic assessment of parent child interactions and for intervention, emphasizing the applied technology of parent training (Baker & Heifetz, 1976; Denhoff and Hyman, 1976; Bernal & North, 1978).

Teaching the mentally retarded

Experts such as Chamberlian and Moss (1953), Bereiter and Englemann (1966), Baker and Heifetz (1976), Haynes (1976), Karnes et al. (1968) and Felix (1989) insist that mentally retarded can develop his optimum physical ability and mental agility and skills, if given adequate instruction and ample time.

The importance of a functional curriculum for the mentally retarded has been stressed for years by special educators (Childs, 1979; Kirk and Johnson, 1951; Kolstoe, 1976; Mac Millian, 1977). It has been reasoned that a functional curriculum would provide such children with the knowledge and skills necessary for a more successful post-school adjustment.

All academic teaching is directed toward practical, daily needs. The subject areas include time, money and functional reading. Time is related directly to daily work schedules, money skills are taught in real-life situations. In mathematics, number skills are used to count out objects as they relate to work, to count by fives and tens, and to learn the concept of more and less, few and many, and so on. Community and transportation signs, application words, restaurant menus, are all a part of the reading programme. Daily living skills are practised to make each student as independent as possible in home, community, and work place. These include making lunches (home), travel training (community) and punctuality (work place). Many of these skills are interrelated and are taught in a variety of settings. Social skills are developed by co-operation with peers and adults (Anderson, Mc Gill, King, Pogue, Taylor, 1984).

Merachinik and Quattlebaum (1963) briefly reported a study in which five retarded adolescents were given programmed instruction in addition, substraction, multiplication and division over a six month period. A published programme was used and the material was presented on a manually operated teaching machine. Five control subjects received instruction on the same material in groups which made use of individual work books and teacher-lecture presentations. At the end of the study, both groups showed some gains in arithmetic computation and arithmetic reasoning. They did not, however, differ significantly from each other on any of these measures.

According to Kozier (1957), "The Three C's concept of Special Education for the mentally retarded and the scheme for the Total Integrated Development of the MR child are based on the importance of parent involvement in the training programmes for their MR children."

According to Felix (1989), "through the Three C's concept based on working with shapes, the mentally retarded person moves directly towards a vocation much more quickly in a more economical way and with much less intellectual effort. He becomes familiar with life's processes and successfully goes through the various steps needed to make an independent living simultaneously developing his personality.

Need for Counselling Parents of Mentally retarded children

The need of counselling parents for solving their psychological problems and keeping emotional stability for the effective management of MR children are felt by Tips & Lynch, Perkins, and Meyer (1962). Most parental counselling will concern itself eventually with the genetic question only. Kanner (1952) points out that parents of a retarded child are almost invariably plagued by the question, whether to have another? While some parental conflicts are associated with uncertainty about the cause of retardation (Fried, 1955). In the opinion of Tips, Meyer and Perkins (1962), "the genetic counselling should be an integral part of the overall management of the family and the genetic counsellor should have a deep respect for the sensitivities, attitudes, values and reactions of the client."

Researches like those of Sylvia (1964), Thurston (1960), Wolfensberger (1983), Dalton and Epstein (1963), Blatt (1957) also stress the need for counselling parents of mentally retarded children.

In Kerala, a few research studies have been conducted in the area of mental retardation like those of Vimala (1978), Merlene (1985), Komalam (1985), Sukumaran (1986), Preetha (1988), Suresh (1989) and Beena (1991). But the studies carried out, so far, have not made any attempt to study the

level of parental involvement in the education and management of the mentally retarded children. The present study not only tries to fill this gap, but also attempts to relate the levels of parental involvement to the attainment of mentally retarded children in certain basic skills such as reading, writing, arithmetic and self-management. Hence the relevance of the present study.

5 METHODOLOGY

The present study is an attempt to find out the association between Parental Involvement in the Education and Management of Mentally Retarded children (abbreviated as MR children) in Kerala (independent variable) and attainment of MR children in the six basic skills defined earlier (dependent variables). The methodology adopted for the study is detailed below:

5.1. Sample for the study

The initial sample for the study was 400 MR children and their parents. But some of the parents had to be dropped from the study, since the data collected from them were rather incomplete, even after making several attempts to get their co-operation. As such, the MR children of such parents were also excluded from the study. Thus the final sample for the study consisted of 315 MR childre
(from the residential and non-residential schools for the

MR children in Kerala) and their parents. Selection of the sample was done on the basis of 'proportionate stratified random sampling technique'. The list of institutions selected for the study is given as Table 1. Tables 2 and 3 provide the details of the sample of MR children under study and their parents respectively.

Table: 1. List of Institutions for the Mentally Retarded children in Kerala selected for the study

Sl. No.	Name of the Institution	Residential/ Non-residential	Rural/ Urban	District
1.	Rotary Institute for children in need of special care, Vazhuthacaud, Trivandrum.	Residential-cum-Day Centre.	Urban	Trivandrum
2.	C.H. Mohammed Koya Memorial School for Mentally Deficient, Pangappara, Trivandrum.	Residential	Rural	Trivandrum
3.	Home for the Mentally Retarded (YWCA), Quilon.	Non-residential	Urban	Quilon
4.	Asha Bhavan, Changanacherry.	Residential	Rural	Kottayam
5.	Kripa Special School for Mentally Retarded, Choondy, Changanacherry.	Residential	Rural	Kottayam
6.	Vikas Vidhyalaya (Lions club), Kottayam.	Non-residential	Urban	Kottayam
7.	Asha Nilayam School for Mentally Retarded, Ponkunnam, Kottayam.	Residential-cum-Day centre.	Rural	Kottayam
8.	Vimukha Special School, H.M.T. Colony, Kalamassery.	Non-residential	Urban	Ernakulam

Sl. No.	Name of the Institution	Residential/ Non-residential	Urban/ Rural	District
9.	Seenai School for Mentally Retarded, Perumbavur, Ernakulam.	Residential	Rural	Ernakulam
10.	Educational Service Society of India (ESSI), Alwaye.	Non-residential	Urban	Ernakulam
11.	Karunalayam (CSI), Alwaye.	Residential	Urban	Ernakulam
12.	Asha Kiran, Medical College, Calicut.	Non-residential	Urban	Calicut
13.	School for Mentally Retarded (Jaycee Society), Tellicherry.	Non-residential	Rural	Cannannore
14.	Ashrayam Inner Wheel Special School, Thottada, Cannannore.	Non-residential	Rural	Cannannore

Table: 2. Details of the Sample of MR children under study

Level of Mental Retardation	Residential	Non-residential	Total No. & %
Mild Mental Retardation	42 (13.33%)	15 (4.77%)	57 (18.10%)
Moderate Mental Retardation	184 (58.41%)	43 (13.65%)	227 (72.06%)
Severe Mental Retardation	21 (6.67%)	10 (3.17%)	31 (9.84%)
Total	247 (78.41%)	68 (21.59%)	315 (100%)

Table: 3. Details of the sample of Parents under study

Rural Parents No. & %	Urban Parents No. & %	Total No. & %
178 (56.51%)	137 (43.49%)	315 (100%)

5.2. Tools used

The following are the tools used for collecting data relevant for the present study:

5.2.1. Parent Involvement Scale

5.2.2. Basic Skills Attainment Test (BSA-Test) for Mentally Retarded Children (Parts A, B, C, D, E & F).

5.2.3. General Data Sheet for Mentally Retarded Children.

5.2.4. General Data Sheet for Parents.

The essential details regarding the different tools used for the study are provided below:

5.2.1. Parent Involvement Scale

The Parent Involvement Scale was prepared for measuring the level of parental involvement in the education

and management of MR children. The scale consists of ~~three sections, having~~ 90 statements in total which are intended to measure the three components identified as aspects indicating Parental Involvement viz., Personal Care, Educational Care and Health Care (Physical, Mental and Social dimensions), the details being given in the Manual of Directions. The Parent Involvement Scale and the Manual of Directions are given as Appendix I and Appendix II respectively.

5.2.2 The Basic Skills Attainment Test (BSA-Test) for Mentally Retarded Children (Parts A, B, C, D, E & F).

The Basic Skills Attainment Test (BSA-Test) for Mentally Retarded children (Parts A, B, C, D, E & F) was prepared to measure the level of attainment of mentally retarded children in the six basic skills under study, the details being as shown below:

Part A - Self-care skills
Part B - Reading skills
Part C - Writing skills
Part D - Arithmetic Skills
Part E - Communication skills
Part F - Social skills

The details regarding the BSA-Test are given in the Manual of Instructions. The test and manual are given as Appendix III and Appendix IV respectively.

5.2.3 General Data Sheet for Mentally Retarded Children

The General Data Sheet for Mentally Retarded children was meant to collect general information about the MR children under study like name, sex, name of the institution, locality, type of the institution (residential/non-residential/residential-cum-Day Centre) and level of mental retardation (mild/moderate/severe). The General Data Sheet thus prepared is given as Appendix V.

5.2.4 General Data Sheet for Parents

The General Data Sheet for Parents was meant to collect general information about the parents of the MR children under study. The data sheet contains provision for all the essential general information about the parents under study (Vide Appendix VI).

5.3 Reliability and Validity of the Tools used

The reliability and validity co-efficients calculated for the Parent Involvement Scale and BSA-Test indicate that the tests are reasonably reliable and valid instruments for the purpose of the present study. The Manuals of the tests contain the details relating to the reliability and validity of the tests.

5.4 Procedure for Data Collection

The Parent Involvement Scale was administered on the parents of the MR children under study. Home visits were made for meeting the parents to fill in the Parent

Involvement Scale and the General Data Sheets. The relevant data were obtained from both the parents (father and mother), wherever possible, and in some houses, a single parent (father or mother available) provided the information needed. For practical purposes, 'parent involvement' was considered as a single index, combining the involvement of father and mother in the education and management of their MR children. The BSA-Test was administered personally on the MR children to measure their level of attainment in the six basic skills under study. The co-operation of the class teachers were sought ~~sort~~ in the administration of the BSA-Test. General information regarding the MR children were collected using the General Data Sheet. The data thus collected were processed appropriately.

5.5 Identification of High, Average and Low Parental Involvement Groups

The High, Average and Low Parental Involvement Groups were identified using mean and sigma (M+σ), the details of which are described later in the Analysis section (Vide p.30).

5.6 Identification of High, Average and Low Basic Skills Attainment Groups

As in the previous case, the High, Average and Low Basic Skills Attainment Groups were identified using M$\pm\sigma$, the details of which as described later in the analysis section (vide p.31).

5.7. Scoring

The scoring scheme used for the Parent Involvement Scale and the BSA-Test for assessing the attainment of the six basic skills are detailed in the respective Manuals of Directions (Appendix II and Appendix IV respectively).

5.8. Data Processing

The data obtained were analysed using appropriate statistical techniques like computation of Mean (M), Sigma (σ), Percentages, Critical Ratio (two-tailed test of significance for difference between percentages) and chi-square test of significance (χ^2). The details of the analysis carried out are presented in the following sections.

6 ANALYSIS AND DISCUSSIONS

The analysis is carried out with a view to finding out specific answers to the objectives taken up in the study. The details of the analysis are presented below under the following major heads:

- 6.1. Identification of the level of Parental Involvement in the education and management of MR children.
- 6.2. Identification of the level of attainment of MR children in the following six basic skills:

6.2.1. Self-care skills	6.2.2. Reading skills
6.2.3. Writing skills	6.2.4. Arithmetic skills
6.2.5. Communication skills	6.2.6. Social skills

6.3. Comparison of male and female MR children with respect to their level of attainment in the six basic skills under study.

6.4. Determination of the association between Parental Involvement in the education and management of MR children and their attainment in each of the six basic skills under study.

6.5. Influence of Parental Involvement on the attainment of each of the six basic skills under study with respect to the three sub-groups of MR children.

The details of the analysis done with respect to each section are presented below.

6.1 Identification of the level of Parental Involvement in the education and management of MR children.

An attempt is made in this section to study the level of Parental Involvement in the education and management of the MR children in the institutions for the mentally retarded in Kerala. The details of identifying the high, average and low groups with respect to parental involvement are described below.

Identification of High, Average and Low Parental Involvement groups.

The High, Average and Low Parental Involvement groups were identified by classifying the general sample into three groups viz., high, average and low parental involvement groups, using parental involvement scores. Assuming a normal distribution of parental involvement scores, the conventional procedure of using sigma distance for dividing the sample was used, considering the base line of the normal curve representing the distribution to the extent from -3 to +3 i.e., over a range of 6, a range of 2 was allotted for each group. Thus, subjects whose parental involvement scores fell between $M \pm \sigma$ were classified as 'Average Parental Involvement Group.' Those subjects whose score was above $(M+\sigma)$ were considered as 'High Parental Involvement Group', while subjects whose scores were below $(M - \sigma)$ were classified as 'Low Parental Involvement Group'. The distribution of the sample in the three Parental Involvement groups is presented in Table 4.

Table: 4. Classification of High, Average and Low Parental Involvement Groups

Levels of Parental Involvement	Number	Percentage
High Parental Involvement Group (above $M+\sigma$)	38	12.06%
Average Parental Involvement Group (between $M+\sigma$ and $M-\sigma$)	214	67.94%
Low Parental Involvement Group (below $M-\sigma$).	63	20.00%
Total	315	100

It is evident from Table 4 that only a small proportion (12.06%) of parents under study show high level of involvement in the education and management of their MR children. The table further reveals that 20 per cent of the parents belong to the low parental involvement group, while the majority (67.94%) have average involvement in the education and management of their MR children.

6.2. Identification of the level of attainment of MR children in the six basic skills

An attempt is made here to identify the level of attainment of MR children in the following six basic skills;

6.2.1 Self-care skills 6.2.2 Reading skills
6.2.3 Writing skills 6.2.4 Arithmetic skills
6.2.5 Communication skills 6.2.6 Social skills

Identification of the High, Average, and Low attainment groups with respect to each of the six basic skills under study was done following the same procedure discussed in the earlier section in connection with the identification of Parental Involvement Groups. The details of the classification are presented in Tables 5 to 10.

Table: 5. Level of Attainment in Self-care skills of MR children under study

Level of attainment in self-care skills.	Boys No. & %	Girls No. & %	Total No. & %
High Self-care skills Attainment Group (Above $M+\sigma$). .	31 (9.84%)	20 (6.35%)	51 (16.19%)
Average Self-care skills Attainment Group (between $M+\sigma$ and $M-\sigma$).	131 (41.59%)	89 (28.25%)	220 (69.84%)
Low Self-care skills Attainment Group (below $M-\sigma$).	25 (7.94%)	19 (6.03%)	44 (13.97%)
Total	187 (59.37%)	128 (40.63%)	315 (100%)

Table: 6. Level of Attainment in Reading Skills of MR children under study

Level of Attainment in Reading skills	Boys No. & %	Girls No. & %	Total No. & %
High Reading Skills Attainment Group (above $M+\sigma$).	58 (18.42%)	37 (11.74%)	95 (30.16%)
Average Reading Skills Attainment Group (between $M+\sigma$ and $M-\sigma$).	69 (21.90%)	59 (18.73%)	128 (40.63%)
Low Reading Skills Attainment Group (below $M-\sigma$).	60 (19.05%)	32 (10.16%)	92 (29.21%)
Total	187 (59.37%)	128 (40.63%)	315 (100%)

Table: 7. Level of Attainment in Writing Skills of MR children under study

Level of Attainment in Writing Skills	Boys No. & %	Girls No. & %	Total No. & %
High Writing Skills Attainment Group (above $M+\sigma$).	29 (9.21%)	18 (5.71%)	47 (14.92%)
Average Writing Skills Attainment Group (between $M+\sigma$ and $M-\sigma$).	115 (36.51%)	84 (26.67%)	199 (63.18%)
Low Writing Skills Attainment Group (below $M-\sigma$).	43 (13.65%)	26 (8.25%)	69 (21.90%)
Total	187 (59.37%)	128 (40.63%)	315 (100%)

Table: 8. Level of Attainment in Arithmetic Skills of MR children under study

Level of Attainment in Arithmetic Skills	Boys No. & %	Girls No. & %	Total No. & %
High Arithmetic Skills Attainment Group (above $M+\sigma$).	22 (6.98%)	21 (6.67%)	43 (13.65%)
Average Arithmetic Skills Attainment Group (between $M+$ and $M-\sigma$).	139 (44.14%)	95 (30.15%)	234 (74.29%)
Low Arithmetic Skills Attainment Group (below $M-\sigma$).	26 (8.25%)	12 (3.81%)	38 (12.06%)
Total	187 (59.37%)	128 (40.63%)	315 (100%)

Table: 9. Level of Attainment in Communication Skills of MR children under study

Level of Attainment in Communication Skills.	Boys No. & %	Girls No. & %	Total No. & %
High Communication Skills Attainment Group (Above $M+\sigma$).	49 (15.56%)	34 (10.79%)	83 (26.35%)
Average Communication Skills Attainment Group (between $M+\sigma$ and $M-\sigma$).	116 (36.83%)	82 (26.03%)	198 (62.86%)
Low Communication Skills Attainment Group (below $M-\sigma$).	22 (6.98%)	12 (3.81%)	34 (10.79%)
Total	187 (59.37%)	128 (40.63%)	315 (100%)

Table: 10. Level of Attainment in Social Skills of MR children under study

Level of Attainment in Social Skills	Boys No. & %	Girls No. & %	Total No. & %
High Social Skills Attainment Group (above $M+\sigma$).	34 (10.79%)	29 (9.21%)	63 (20.00%)
Average Social Skills Attainment Group (between $M+\sigma$ and $M-\sigma$).	127 (40.33%)	87 (27.61%)	214 (67.94%)
Low Social Skills Attainment Group (below $M-\sigma$).	26 (8,25%)	12 (3.81%)	38 (12.06%)
Total	187 (59.37%)	128 (40.63%)	315 (100%)

Discussion of results:

It is clear from Table 5 that only 16.19 per cent of the MR children under study fall in the High Self-care skills attainment group. The table further shows that majority of the MR children (69.84%) fall in the average group and the remaining 13.97 per cent fall in the low group.

Table 6 shows that 30.16 per cent of MR children under study belong to the High Reading Skills Attainment Group, while others fall either in the Average Group (40.63%) or Low group (29.21%) with respect to Reading skills attainment.

Regarding Writing skills attainment, it is seen from Table 7 that only 14.92 per cent of the MR children under study have high attainment in writing skills, whereas the majority (63.18%) belong to the Average Writing Skill attainment group and the remaining 21.90 per cent of the MR children fall in the low group.

With respect to Arithmetic Skills attainment, it is found from Table 8 that, as in the previous cases, majority of the MR children under study belong to the Average Arithmetic Skills attainment group (74.29%), while others fall either in the low (12.06%) or High Arithmetic Skills attainment group (13.65%).

As far as the Communication Skills attainment is concerned, it is found that 26.35 per cent of the MR children fall in the 'High Communication Skills Attainment Group', while the majority of the MR children fall in the Average Communication Skills Attainment Group (62.86%), the remaining 10.79 per cent being obviously in the low group (vide Table 9).

It is found from Table 10 that only 20 per cent of the MR children under study fall in the High Social Skills attainment group. The table further shows that majority of the MR children belong to the average group (67.94%), while the remaining 12.66 per cent falls in the low group.

Summated form of the level of attainment of MR children in the six basic skills under study

In order to get a clear picture about the comparative position of the MR children with respect to their attainment in the six basic skills under study, a further attempt is made here to present the details in this context in a summated form as shown in Table 11.

Table: 11. Summated form of the Level of Attainment of MR children in the six basic skills under study

Basic skills	Level of Attainment High	 Average	 Low	Total
Self-care skills	51 (16.19%)	220 (69.84%)	44 (13.97%)	315 (100%)
Reading skills	95 (30.16%)	128 (40.63%)	92 (29.21%)	315 (100%)
Writing skills	47 (14.92%)	199 (63.18%)	69 (21.90%)	315 (100%)
Arithmetic skills	43 (13.65%)	234 (74.29%)	38 (12.06%)	315 (100%)
Communication skills	83 (26.35%)	198 (62.86%)	34 (10.79%)	315 (100%)
Social skills	63 (20.00%)	214 (67.94%)	38 (12.06%)	315 (100%)

As it is evident from Table 11, a relatively higher proportion of MR children in the 'High' and 'Low' attainment groups show that they have attainment in Reading skills, the proportions in the 'High' and 'Low' groups being 30.16 per cent and 29.21 per cent respectively. A relatively lower proportion of MR children in the High group (13.65%) and the Low group (12.06%) show attainment in Arithmetic skills. As a result of this, a reverse situation is found with respect to the average group, i.e., a relatively lower proportion (40.63%) is found for Reading skills and a relatively higher proportion (74.29%) for Arithmetic skills in the average attainment group.

6.3. Comparison of the male and female MR children with respect to their level of Attainment in the Six Basic Skills under study

The male and female MR children under study were compared to find out if there is any significant difference between them in the level of attainment with respect to each of the six basic skills under study. The comparison was done by applying the two-tailed test of significance for difference between percentages (Garrett: 1985, pp.235-236). The details regarding the data and results of the test of significance are shown in Tables 12 to 17.

Table: 12. Comparison of Male and Female MR children: Attainment in self-care skills

Level of Attainment in self-care skills	Boys N_1	Boys P_1	Girls N_1	Girls P_1	CR	Level of significance
High Self-care skills attainment.	31	60.80%	20	39.20%	1.50	$P > .05$
Average Self-care skills attainment.	131	59.50%	89	40.50%	2.76	$P < .01$
Low Self-care skills attainment.	25	56.80%	19	43.20%	0.89	$P > .05$

Table: 13. Comparison of Male and Female MR children: Attainment in Reading Skills.

Level of attainment in Reading skills.	Boys N_1	Boys P_1	Girls N_1	Girls P_1	CR	Level of significance
High Reading skills attainment.	58	61.00%	37	39.00%	2.09	$P < .05$
Average Reading skills attainment.	69	53.90%	59	46.10%	0.88	$P > .05$
Low Reading skills attainment.	60	65.20%	32	34.80%	2.79	$P < .01$

Table: 14. Comparison of Male and Female MR children: Attainment in Writing Skills.

Level of Attainment in Writing skills.	Boys N_1	Boys P_1	Girls N_1	Girls P_1	CR	Level of significance
High Writing skills attainment.	29	61.70%	18	38.30%	1.57	$P > .05$
Average Writing skills attainment.	115	57.80%	84	42.20%	2.17	$P < .05$
Low Writing skills attainment.	43	62.30%	26	37.70%	1.98	$P > .05$

Table: 15. Comparison of Male and Female MR children: Attainment in Arithmetic Skills.

Level of attainment in Arithmetic skills.	Boys N_1	Boys P_1	Girls N_1	Girls P_1	CR	Level of significance.
High Arithmetic skills attainment.	22	51.20%	21	48.80%	0.15	$P > .05$
Average Arithmetic skills attainment.	139	59.40%	95	40.60%	2.82	$P < .01$
Low Arithmetic skills attainment.	26	68.40%	12	31.60%	2.12	$P < .05$

Table: 16. Comparison of Male and Female MR Children: Attainment in Communication skills.

Level of attainment in Communication skills.	Boys N_1	Boys P_1	Girls N_1	Girls P_1	CR	Level of significance.
High Communication skills attainment.	49	59.00%	34	41.00%	1.61	$P > .05$
Average Communication skills attainment.	116	58.60%	82	41.40%	2.44	$P < .05$
Low Communication skills attainment.	22	64.70%	12	35.30%	1.65	$P > .05$

Table: 17. Comparison of Male and Female MR Children: Attainment in Social skills.

Level of attainment in Social skills	Boys N_1	Boys P_1	Girls N_1	Girls P_1	C R	Level of significance
High Social skills attainment.	34	54.00%	29	46.00%	0.63	$P > .05$
Average Social skills attainment.	127	59.30%	87	40.70%	2.67	$P < .01$
Low Social skills attainment.	26	68.40%	12	31.60%	2.12	$P < .05$

Discussion

Comparison of male and female MR children with respect to their attainment in self-care skills (vide Table 12) showed that the MR children in the average group alone differ significantly, the difference being in favour of boys (C.R=2.76; $P < .01$). In other words, the proportion of boys is higher in the Average group when compared to their female counterparts. No sex difference is noticed in the high and low self-care-attainment groups (C.R. values 1.50 and 0.89 respectively). In other words, boys and girls in the high and low groups are identifical with respect to their attainment in self-care skills.

In the case of attainment in Reading skills (vide Table 13) a significant difference between the sexes is noted with respect to the high group (C.R.=2.09; $P < .05$) and the low group (C.R.=2.79; $P < .01$), the difference being in favour of boys in both cases. To put it differently, there is a higher proportion of boys in the high and low Reading skills attainment group. No sex difference is noticed in the case of the average group (C.R.=0.88), showing that the attainment in Reading skills of male and female MR children in the average group is the same.

As far as the attainment in Writing skills is concerned, the Table 14 reveals that a sex difference is noticed in the case of the MR children in the average group (C.R.=2.17; $P < .05$) and the low group (C.R.=1.98; $P < .05$)

the difference being in favour of boys in both the cases. As noticed in the earlier cases (Reading and Writing skills attainment), here also, the proportion of boys is higher in the average and low writing skills attainment groups, when compared to their female counterparts. No sex difference is noticed in the case of the high group (C.R.=1.57).

In the case of attainment in Arithmetic skills (vide Table 15), the comparison reveals that sex difference is noticed in the case of boys and girls in the average group (C.R.=2.82; $P < .01$) and the low group (C.R.=2.12; $P < .05$), the difference being in favour of boys, as in the previous cases. The proportion of boys is higher in the high and low arithmetic skills attainment groups, as compared to girls. No sex difference is noticed in the high arithmetic skill attainment group (C.R.=0.15).

As seen in Table 16, the male and female MR children in the average group differ significantly showing a clear sex difference in Communication skills attainment (C.R.=2.44; $P < .05$). The difference noticed in this case too is in favour of the boys. No sex difference is noticed in communication skill attainment in the high and low groups (C.R. values 1.61 and 1.65 respectively).

Comparison of the male and female MR children with respect to their attainment in Social skills (vide Table 17)

showed that the sexes differ significantly both in the average group (C.R.=2.67; $P < .01$) and the low group (C.R.=2.12; $P < .05$), the difference being in favour of the boys, as in the previous cases. In other words, the proportion of boys is higher in the average and low social skills attainment group, when compared to girls. No sex difference is seen in the case of the high group (C.R.=0.63).

6.4 Determination of the association between Parental Involvement in the education and management of MR children and their Attainment in each of the six basic skills under study

In this section, an attempt is made to study the association between Parental Involvement and attainment of the MR children under study in the following six basic skills:

6.4.1 Self-care skills
6.4.2 Reading skills
6.4.3 Writing skills
6.4.4 Arithmetic skills
6.4.5 Communication skills
6.4.6 Social skills

Chi-square test of significance (X^2) was done to determine the association between Parental Involvement and attainment in each of the six basic skills under study. The details of the analysis done in this context are presented below.

6.4.1. Association between Parental Involvement and attainment in self-care skills of MR children.

Table 18 shows the details regarding the χ^2 test of significance for deciding the association between Parental Involvement and attainment in self-care skills of MR children in Kerala.

Table: 18. Association between Parental Involvement and attainment in Self-care skills of MR children: χ^2 test of significance.

Self-care skills / Parental Involvement	High	Average	Low	Total
High	8 (6.5)	27 (27.3)	5 (6.2)	40
Average	33 (35.1)	155 (148.1)	29 (33.8)	217
Low	10 (9.4)	33 (39.6)	15 (9)	58
Total	51	215	49	315

$\chi^2 = 6.845$, df $= 4$

Table 18 shows that the χ^2 value obtained is 6.845, which is less than the Table value for χ^2 test of significance at 0.05 level which is 9.488 (Garrett: 1985, Table E, p.462). This indicates that there is no evidence of any real association between Parental Involvement and attainment in self-care

skills, since the observed results are close to those to be expected on the hypotheses of independence.

6.4.2. Association between Parental Involvement and attainment in Reading skills of MR children.

The details regarding the χ^2 test of significance for deciding the association between Parental Involvement and attainment in Reading skills of MR children in Kerala are given in Table 19.

Table: 19. Association between Parental Involvement and attainment in Reading Skills of MR children: χ^2 test of significance

Reading skills / Parental Involvement	High	Average	Low	Total
High	10 (10.4)	18 (17.9)	10 (9.65)	38
Average	59 (57.6)	101 (99.8)	51 (53.6)	211
Low	17 (18)	30 (31.2)	19 (16.8)	66
Total	86	149	80	315

$\chi^2 = 0.5955$, df $= 4$.

The χ^2 value obtained in the above table (vide Table 19 is 0.5955 which is much lower than the Table value for χ^2 test of significance at 0.05 level, revealing that there is no real association between Parental Involvement and attainment in Reading skills.

6.4.3 Association between Parental Involvement and attainment in Writing skills of MR children.

Table 20 shows the details regarding the χ^2 test of significance for deciding the association between Parental Involvement and attainment in Writing skills of MR children in Kerala.

Table: 20. Association between Parental Involvement and attainment in Writing skills of MR children: χ^2 test of significance.

Writing skill / Parental Involvement	High	Average	Low	Total
High	4 (5.5)	24 (24)	10 (8.4)	38
Average	33 (31.3)	131 (135.2)	50 (47.5)	214
Low	9 (9.2)	44 (39.8)	10 (14)	63
Totals	46	199	70	315

$\chi^2 = 2.656$ df = 4

It is seen from Table 20 that the χ^2 value obtained is 2.656 which is lower than the Table value for χ^2 test of significance at 0.05 level, showing that there is no real association between Parental Involvement and attainment in Writing skills of MR children in Kerala.

6.4.4 Association between Parental Involvement and attainment in Arithmetic skills of MR children.

The details regarding the χ^2 test of significance for deciding the association between Parental Involvement and attainment in Arithmetic skills of MR children in Kerala are given in Table 21.

Table: 21. Association between Parental Involvement and attainment in Arithmetic skills of MR children: χ^2 test of significance

Arithmetic skills / Parental Involvement	High	Average	Low	Total
High	4 (4.9)	27 (29.3)	8 (4.7)	39
Average	27 (27)	166 (160.3)	20 (25.7)	213
Low	9 (8)	44 (47.4)	10 (7.6)	63
Total:	40	237	38	315

$\chi^2 = 5.248$ df = 4

Table 21 shows that the χ^2 value obtained is 5.248, which is lower than the Table value for χ^2 test of significance at 0.05 level. This shows that there is no evidence of any real association between Parental Involvement and attainment in Arithmetic skills, since the observed results are close to those to be expected on the hypotheses of independence.

6.4.5 Association between Parental Involvement and attainment in Communication skills of MR children.

Table 22 shows the details regarding the χ^2 test of significance for deciding the association between Parental Involvement and attainment in Communication skills of MR children in Kerala.

Table: 22. Association between Parental Involvement and attainment in Communication skills of MR children: χ^2 test of significance.

Communication skills / Parental Involvement	High	Average	Low	Total
High	9 (9.7)	26 (24.4)	3 (3.9)	38
Average	57 (54.3)	142 (137.2)	15 (22.4)	214
Low	14 (16)	34 (40.4)	15 (6.6)	63
Total	80	202	33	315

$\chi^2 = 15.05$ df = 4

It is seen from Table 22 that the χ^2 value obtained is 15.05 which is higher than the Table value for χ^2 test of significance at 0.05 level, indicating that there is a real association between Parental Involvement and attainment in Communication skills, since the observed results are not close to those to be expected on the hypotheses of independence.

6.4.6 Association between Parental Involvement and attainment in Social skills of MR children.

The details regarding the tests of significance for deciding the association between Parental Involvement and attainment in Social skills of MR children in Kerala are given in Table 23.

Table: 23. Association between Parental Involvement and attainment in Social skills of MR children: χ^2 test of significance

Social skills / Parental Involvement	High	Average	Low	Total
High	7 (7.6)	24 (26.1)	7 (4.3)	38
Average	41 (42.8)	155 (146.7)	18 (24.5)	214
Low	15 (12.6)	37 (43.2)	11 (7.2)	63
Total	63	216	36	315

$\chi^2 = 7.511$ df=4

It is seen from Table 23 that the X^2 value obtained is 7.511 which is lower than the Table value for X^2 test of signifidance at 0.05 level, indicating that there is no real association between Parental Involvement and attainment in Social skills.

6.5 Influence of Parental Involvement on the attainment of each of the six basic skills under study with respect to the three sub-groups of MR children.

The results found in the earlier sections of the analysis (vide Section 6.4) prompted a further exploration with respect to the association between Parental Involvement in the education and management of MR children and their attainment in each of the six basic skills under study. It was, therefore, decided at this stage to study the influence of Parental Involvement on the attainment of each of the six basic skills under study with respect to the following three sub-groups of mentally retarded children:

6.5.1 mildly retarded children.

6.5.2 moderately retarded children.

6.5.3 severely retarded children.

The analysis carried out in this context with respect to each of the six basic skills under study is presented below:

6.5.1 Influence of Parental Involvement on attainment in Self-care skills of the three sub-groups of MR children.

Tables 24 to 26 show the details relating to the influence of Parental Involvement on attainment of self-care skills of the three sub-groups of MR children under study.

Table: 24. Influence of Parental Involvement on attainment in Self-care skills of Mildly retarded children

Self-care skills / Parental Involvement	High	Average	Low	Total
High	(6.9) 6	(30.1) 30	(6.9) 8	44
Average	(1.9) 2	(8.2) 9	(1.9) 1	12
Low	(2) 1	(0.7) 0	(0.2) 0	1
Total	9	39	9	57

df=4 χ^2 =4.901

Table: 25. Influence of Parental Involvement on Attainment of Self-care skills of Moderately retarded children.

Parental Involvement \ Self-care skills	High	Average	Low	Total
High	(0.66) 1	(4.1) 3	(1.2) 2	6
Average	(21.9) 23	(136.8) 143	(39.5) 34	199
Low	(2.2) 1	(13.7) 10	(3.9) 9	20
Total	25	156	45	227

χ^2 =10.326 df = 4

Table: 26. Influence of Parental Involvement on Attainment in Self-care skills of Severely retarded children.

Parental Involvement \ Self-care skills	High	Average	Low	Total
High	0	0	0	0
Average	(1.5) 2	(4.6) 4	(1.8) 2	8
Low	(4.5) 4	(13.4) 14	(5.2) 5	23
Total	6	18	7	31

χ^2 =0.349 df = 4

Discussions

It is clear from the above three tables (vide Tables 24 to 26) that when the sub groups of MR children were treated differently, a significant association is noticed between Parental Involvement and Self-care skills of Moderately retarded children (X^2=10.326 significant at 0.05 level). This implies that parental involvement influences the attainment in self-care skills of moderately retarded children. In the case of the other two sub-groups viz., midly retarded and severely retarded groups, parental involvement does not seem to have any significant influence on the attainment in self-care skills. The above finding is not consistent with popular expectations. One would naturally expect an association between Parental Involvement and attainment in self-care skills of mildly retarded children also. A satisfactory explanation for this is rather difficult. A possible explanation for not finding an association between the variables of the study may be that the mildly retarded children can more or less manage to develop self-care skills without much parental support. This finding throws light on the popular belief that too much parental involvement would make the children to become more dependent on parents and thus negatively affect their attainment in self-care skills (Felix, 1989).

6.5.2 Influence of Parental Involvement on attainment in Reading skills of the three sub-groups of mentally retarded children

Tables 27 to 29 show the details relating to the influence of Parental Involvement on attainment of Reading skills of the three sub-groups of MR children under study.

Table: 27. Influence of Parental Involvement on attainment in Reading skills of Mildly retarded children

Parental Involvement \ Reading skills	High	Average	Low	Total
High	(4.8) 4	(1.7) 2	(1.3) 2	8
Average	(23.3) 24	(9.6) 10	(6.2) 5	39
Low	(5.9) 6	(2.5) 2	(1.6) 2	10
Total	34	14	9	57

χ^2 =0.962, df = 4

Table: 28. Influence of Parental Involvement on attainment in Reading skills of Moderately retarded children

Reading skills Parental Involvement	High	Average	Low	Total
High	(6) 7	(11.8) 11	(6.1) 6	24
Average	(39.4) 40	(77.5) 77	(40.1) 40	157
Low	(11.6) 10	(22.7) 24	(11.8) 12	46
Total	57	112	58	227

$\chi^2 = 0.5591$, df $= 4$

Table: 29. Influence of Parental Involvement on attainment in Reading skills of severely retarded children

Reading skills Parental Involvement	High	Average	Low	Total
High	(.2) 0	(1.2) 2	(4.6) 4	6
Average	(.6) 0	(3.3) 3	(13.2) 14	17
Low	(0.3) 1	(1.5) 1	(6.2) 6	8
Total	1	6	24	31

$\chi^2 = 2.639$, df $= 4$

Discussion

It is seen from Tables 27 to 29 that no significant association is noticed between Parental Involvement and attainment in Reading skills of all the three sub-groups of MR children. This finding supports the earlier finding with respect to the total group of MR children showing that parental involvement does not have any significant influence on the attainment of Reading skills of MR children. This may be due to the fact that teachers play a major role in developing the reading skills of MR children.

6.5.3. Influence of Parental Involvement on attainment in Writing skills of the three sub-groups of MR children

Tables 30 to 32 show the details relating to the influence of Parental Involvement on attainment of writing skills of the three sub-groups of MR children under study.

Table: 30. Influence of Parental Involvement on attainment in Writing skills of Mildly retarded children

Parental Involvement \ Writing skills	High	Average	Low	Total
High	(3.1) 3	(4.1) 5	(0.8) 0	8
Average	(14.7) 15	(19.3) 18	(4) 5	38
Low	(4.2) 4	(5.6) 6	(1.2) 1	11
Total	22	29	6	57

χ^2 =1.383, df =4

Table: 31. Influence of Parental Involvement on attainment in writing skills of Moderately retarded children

Parental Involvement \ Writing skills	High	Average	Low	Total
High	(2.4) 1	(16.2) 17	(4.4) 5	23
Average	(16.8) 17	(112.1) 109	(30.1) 33	159
Low	(4.8) 6	(31.7) 34	(8.5) 5	45
Total	24	160	43	227

χ^2 =3.208, df = 4.

Table: 32. Influence of Parental Involvement on attainment in Writing skills of severely retarded children

Parental Involvement \ Writing skills	High	Average	Low	Total
High	0	(2.3) 2	(3.7) 4	6
Average	0	(6.9) 6	(11) 12	18
Low	0	(2.7) 4	(4.3) 3	7
Total	0	12	19	31

$\chi^2 = 1.289$, df $= 4$

Discussion

As it is evident from Tables 30 to 32 no association is found between Parental Involvement and attainment in writing skills of all the three sub-groups of MR children under study. This finding supports the earlier finding with respect to the Total group of MR children. The reason that can be cited for this situation may be that of the major role played by the teachers in developing the writing skills, as compared to their parents.

6.5.4 Influence of Parental Involvement on attainment in Arithmetic skills of the three sub-groups of MR children

Tables 33 to 35 show the details relating to the influence of Parental Involvement on attainment in Arithmetic skills of the three sub-groups of MR children under study.

Table: 33. Influence of Parental Involvement on attainment in Arithmetic skills of Mildly retarded children

Arithmetic skills / Parental Involvement	High	Average	Low	Total
High	(3.9) 3	(3.9) 5	(.1) 0	8
Average	(18.7) 17	(18.7) 21	(.7) 0	38
Low	(5.4) 8	(5.4) 2	(.2) 1	11
Total	28	28	1	57

$\chi^2 = 8.285$, df = 4

Table: 34. Influence of Parental Involvement on attainment in Arithmetic skills of Moderately retarded children.

Arithmetic skills / Parental Involvement	High	Average	Low	Total
High	(1.3) 0	(20.3) 22	(1.4) 1	23
Average	(9.1) 11	(140.1) 140	(9.8) 9	159
Low	(2.6) 2	(39.6) 38	(2.8) 5	45
Total	13	200	14	227

χ^2 =6.786, df =4

Table: 35. Influence of Parental Involvement on attainment in Arithmetic skills of severely retarded children

Arithmetic skills / Parental Involvement	High	Average	Low	Total
High	0	(1.6) 1	(4.5) 5	6
Average	0	(4.7) 4	(13.4) 14	18
Low	0	(1.8) 3	(5.2) 4	7
Total	0	8	23	31

χ^2 =1.504, df =4

Discussion

As seen in Tables 33 to 35, in the case of Arithmetic skills also, no association is noticed with Parental Involvement with respect to the three sub-groups of MR children under study. This finding confirms the earlier finding with respect to the total group of MR children under study.

6.5.5. Influence of Parental Involvement on attainment in Communication skills of the three sub-groups of MR children.

Tables 36 to 38 show the details relating to the influence of Parental Involvement on attainment in communication skills of the three sub-groups of MR children under study.

Table: 36. Influence of Parental Involvement on attainment in Communication skills of mildly retarded children

Parental Involvement \ Communication skills	High	Average	Low	Total
High	(5.3) 5	(1.6) 2	(0.1) 0	7
Average	(30.2) 30	(9.1) 9	(0.7) 1	40
Low	(7.5) 8	(2.2) 2	(0.2) 0	10
Total	43	13	1	57

χ^2 =0.481, df =4

Table: 37. Influence of Parental Involvement on attainment in communication skills of Moderately retarded children

Parental Involvement \ Communication skills	High	Average	Low	Total
High	(4) 3	(17.9) 20	(2.1) 1	24
Average	(26.3) 30	(116.9) 118	(13.83) 9	157
Low	(7.7) 5	(34.2) 31	(4.1) 10	46
Total	38	169	20	227

χ^2 =13.023, df =4

Table: 38. Influence of Parental Involvement on attainment in Communication skills of severely retarded children

Parental Involvement \ Communication skills	High	Average	Low	Total
High	0	(3.7) 4	(2.3) 2	6
Average	0	(11.0) 12	(6.9) 6	18
Low	0	(4.3) 3	(2.7) 4	7
Total	0	19	12	31

$\chi^2 = 1.288$, df =4

Discussion

Regarding the association between Parental Involvement and Communication skills (vide Tables 36 to 38)it is found that only in the case of the moderately retarded group a significant association is seen between the variables (χ^2=13.02 significant at 0.05 level). It should be pointed out that in the earlier treatment also (total group of MR children), an association is noticed between Parental Involvement and Communication skills. The above finding is noteworthy in the sense that it highlights the need and importance of parental involvement in developing communication skills in the case of the mildly and severely retarded groups.

6.5.6 Influence of Parental Involvement on attainment in Social skills of the three sub-groups of MR children

Tables 39 to 41 show the details relating to the influence of Parental Involvement on attainment in Social skills of the three sub-groups of MR children under study.

Table: 39. Influence of Parental Involvement on attainment in Social skills of mildly retarded children

Parental Involvement \ Social skills	High	Average	Low	Total
High	(4.1) 2	(3.4) 5	(0.6) 1	8
Average	(19.8) 21	(16.4) 18	(2.7) 0	39
Low	(5.1) 6	(4.2) 1	(0.7) 3	10
Total	29	24	4	57

$\chi^2 = 15.175$, df = 4

Table: 40. Influence of Parental Involvement on attainment in Social skills of Moderately retarded children

Parental Involvement \ Social skills	High	Average	Low	Total
High	(3.9) 5	(18.1) 14	(2) 5	24
Average	(25.6) 23	(118.3) 125	(13.1) 9	157
Low	(7.5) 9	(34.7) 32	(3.9) 5	46
Total	37	171	19	227

χ^2 =8.634, df = 4

Table: 41. Influence of Parental Involvement on attainment in Social skills of Severely retarded children

Parental Involvement \ Social skills	High	Average	Low	Total
High	(0) 0	(2.9) 4	(2.1) 1	5
Average	0	(11.0) 10	(7.9) 9	19
Low	0	(4.1) 4	(2.9) 3	7
Total	0	18	13	31

χ^2 =1.241, df = 4.

Discussion

As it is seen from Tables 39 to 41 a significant relation (at 0.01 level) is noticed between Parental Involvement and attainment in social skills of mildly retarded children ($X^2=15.175$, significant at 0.01 level). It should be pointed out that no association was found between the variables when the MR children under study were treated as a total group. The possible reason for noting an association between the variables may be that in the case of the mildly retarded children, most of the parents do not hesitate to show a marked involvement in developing the social skills as compared to that of their counterparts in the moderate and severe retarded groups.

6.6 Identification of the level of Education of the Parents of the MR children under study

An attempt is made in this section to study the level of Education of the parents of the MR children in the institutions for mentally retarded in Kerala. Identification of the high, average and low parental education groups was done following the same procedure adopted for the identification of the high, average and low level of parental involvement groups (vide p.30). The details relating to the high, average and low education groups are shown in Table 42.

Table:42. Classification of Parents into High, Average and Low Parental Education Groups

Levels of Parental Education	Number	Percentage
High Parental Education Group (above $M+\sigma$)	107	33.97%
Average Parental Education Group (between $M+\sigma$ and $M-\sigma$)	42	13.33%
Low Parental Education Group (below $M-\sigma$)	166	52.70%
Total	315	100

As seen from Table 42 majority of the parents of the MR children belong to the 'low' parental education group (52.70%). The remaining proportion of parents fall in the high parental education group (33.97%) or average parental education group (13.33%).

6.7 Comparison of the level of attainment of MR children of High and Low Parental Education groups with respect to each of the six basic skills under study

The level of attainment of MR children of parents belonging to the 'high' and 'low' parental education groups were compared to find out if there is any significant relation between the level of education of parents and the attainment

of MR children in each of the six basic skills under study. The comparison was done, by applying the two-tailed test of significance between means (Garrett: 1985, pp. 213-216). The details regarding the data and results of the test of significance are shown in Table 43.

Table: 43 Comparison of the level of attainment of MR children of High and Low Parental education groups: Data and Results of the test of significance

Basic Skills	High group M_1	High group σ_1	High group N_1	Low group M_2	Low group σ_2	Low group N_2	CR	Level of significance
1. Self-care skills	13.74	2.98	107	14.05	3.06	166	0.84	$P > .05$
2. Reading skills	8.97	2.63	107	8.14	2.61	166	0.81	$P > .05$
3. Writing skills	9.66	3.62	107	10.34	3.82	166	1.49	$P > .05$
4. Arithmetic skills	16.54	5.05	107	16.61	4.36	166	0.47	$P > .05$
5. Communication skills	11.59	3.55	107	11.97	3.89	166	0.84	$P > .05$
6. Social skills	10.76	3.39	107	10.89	3.32	166	0.68	$P > .05$

Discussion

Comparison of the skills attainment of the MR children of high and low parental education groups showed that no significant difference exists between the groups under comparison with respect to the different skills studied. In other words skill attainment of MR children in the high and low parental education groups is more or less the same. This means that 'level of parental education' as a variable has not made any profound influence on the skill attainment of MR children.

6.8 Information about the training given to the parents in handling their MR children

An attempt is made in this section to study the details regarding the nature of the training given, if any, to parents for handling the MR children. The information collected in this context shows that certain steps are, indeed, taken by the institution under study for training the parents in the education and management of their mentally retarded children.

Periodical meeting (once in a month in most of the institutions) are arranged for providing opportunities to parents to interact with each other and share their experiences. Such exchange of views help in parents to

develop fresh insight into the problems of MR children and get opportunities for gaining practical knowledge regarding the various forms of difficulties. Parents are helped to provide home-training to children to rectify the common defect found in children with respect to Self-management skills, Reading skills, Writing skills, Arithmetic skills, Social skills and Communication skills. But it is generally noticed that parents show high interest in participating such meetings during the initial period only. After sometime they tend to loose interest in attending such meetings and therefore show low level of involvement in gaining parental training. However, all possible steps are taken by the institutions under study to do their level best in offering help to parents in educating and managing their MR children. It is observed that all the institutions under study offer help to parents in self-management skills like toilet training, tooth brushing, meal-time behaviour, dressing and grooming. In the case of the development of other skills (Reading, Writing, Arithmetic, Social and Communication skills) the institution vary with respect to the extent of training provided. Attempts are made by the institution for providing training to parents to help their MR children in developing skills essential for daily living. While some of the

institutions give more emphasis for development of social skills, others give more emphasis for the development of academic skills. The information collected with respect to the training provided to the parents of MR children by the different institutions under study are summarized in Table 44.

Table: 44 Information about the training given to the parents in handling their MR children

Areas of training provided to parents of MR children	Mode of training	Extent of training provided by the institution					
		To a great extent		To some extent		Not at all	
		No.	& %	No.	& %	No.	& %
1	2	3					
Toilet training	Simple advice and verbal direction.	14	100%	..	..	..	..
Tooth brushing	Verbal direction and demonstration.	14	100%	..	..	..	..
3. Meal-time behaviour	Simple advice and verbal direction.	14	100%	..	..	..	..
4. Grooming	Verbal direction and demonstration.	14	100%	..	..	..	..
5. Dressing	Verbal direction and demonstration.	14	100%	..	..	..	..
6. Eliminating self injurious behaviour	Simple advice and verbal direction.	14	100%	..	..	..	..
7. Reading ability	Demonstration and practice sessions	10	71.43%	4	28.57%	.	..

1	2	3					
8. Language training	Demonstration and practice sessions.	11	78.57%	3	21.43%	..	..
9. Identifying shapes and colour	Demonstration and practice sessions.	12	85.71%	2	14.29%	.	..
10. Picture naming	Demonstration and practice sessions.	12	85.71%	2	14.29%	..	..
11. Object matching	Demonstration and practice sessions.	12	85.71%	2	14.29%	..	..
12. Counting	Concept development using concrete objects like coloured round balls, pebbles and blocks.	12	85.71%	2	14.29%	.	..
13. Addition and subtraction	Concept development using concrete objects like stones and wooden blocks.	10	71.43%	4	28.57%	.	..
14. Monetary skills	Concept development using concrete objects like coins and currencies.	10	71.43%	4	28.57%	.	..
15. Social responses	Providing situations for development of social skills.	11	78.57%	3	21.43%	.	..
16. Pedestrian skills	Verbal directions and demonstration	11	78.57%	3	21.43%	.	..

6.9 Major Findings

The major findings that emerged from the present study are noted below:

1. Identification of the Level of Parental Involvement in the education and management of the Mentally Retarded (abbreviated as MR) children in the institutions for the Mentally Retarded in Kerala showed that only a small proportion of parents under study (12.06%) have high level of involvement in the education and management of their MR children. Majority of the parents (67.94%) belong to the average involvement group and the remaining proportion (20%) fall in the low parental involvement group.

2. Identification of the Level of Attainment of MR children in the six basic skills under study brought out the following findings:

2.1. Regarding Self-care-skills, it was found that only 16.19 per cent of the MR children under study belong to the High Self-care-skills Attainment Group, whereas the remaining proportion falls in the Average (69.84%) or low (13.97%) Self-care-skills Attainment Groups.

2.2. With respect to Reading Skills, the study found that 30.16 per cent of MR children belong to the High Reading Skills Attainment Group. The proportion of children in the Average and Low Reading Skills Attainment Groups were found to be 40.63 and 29.21 respectively.

2.3. In the case of Writing Skills, it was noted that only 14.92 per cent of the MR children under study come under the High Writing Skills Attainment Group, while the remaining proportion falls in the Average (63.18%) or Low (21.90%) Writing Skills Attainment Groups.

2.4. Regarding Arithmetic Skills, it was found that 13.65 per cent of the MR children belong to the High Arithmetic Skills Attainment Group. The proportion of children in the Average and Low Arithmetic Skills Attainment Group were found to be 74.29 and 12.06 respectively.

2.5. With respect to Communication Skills, the study found that only 26.35 per cent of the MR children fall in the High Communication Skills Attainment Group, whereas the remaining proportion fall in the Average (62.86%) or Low group (10.79%).

2.6. In the case of Social Skills, the study showed that 20 per cent of the MR children under study fall in the High Social Skills Attainment Group. The proportion of children in the Average and Low Social Skills Attainment Group were found to be 67.94 and 12.06 respectively.

3. Comparison of male and female MR children with respect to their level of attainment in the six basic skills under study revealed the following:

3.1. Comparison of the sex groups with respect to the level of attainment in Self-care Skills showed that a significant difference between the groups exist in the case of the average group only ($CR=2.76$; $P < .01$), the difference being in favour of the boys i.e., a sex difference in favour of boys exists only in the Average Self-care attainment group.

3.2. Comparison of the sex groups with respect to level of attainment in Reading Skills showed that a significant difference is noticed in the case of High Group (CR=2.09; $P < .05$) and Low Group (CR=2.79; $P < .01$), the difference being in favour of boys in both the cases, i.e., a sex difference in favour of boys exists in the High and Low Reading Skills Attainment Group.

3.3. Comparison of male and female MR children with respect to their level of attainment in Writing Skills showed that a significant difference exist in the case of the MR children in the average group (C.R.=2.17; $P < .05$) and the low group (C.R.=1.98; $P < .05$), the difference being in favour of boys in both the cases i.e., a sex difference in favour of boys exists in the Average and Low Writing Skills Attainment Group.

3.4. Comparison of the sex groups with respect to level of attainment in Arithmetic Skills showed that a significant difference was noted in the case of boys and girls in the average (CR=2.82; $P < .01$) and the low group (CR =2.12; $P < .05$), the difference being in favour of boys, as in the previous cases, i.e., a sex difference in favour of boys exists in Average and Low Arithmetic Skills Attainment Group.

3.5. Comparison of male and female MR children with respect to level of attainment in Communication Skills showed that the male and female MR children in the average group differ significantly showing a clear sex difference in Communication Skills Attainment (CR=2.44; $P < .05$). The difference noticed in this case too is in favour of boys i.e., a sex difference (in favour of boys) exists only in Average Communication Skills Attainment Group.

3.6. Comparison of the sex groups with respect to their level of attainment in Social Skills showed that the sexes differ significantly both in the Average Group (CR =2.67; $P < .01$) and the Low Group (CR=2.12; $P < .05$), the difference being in favour of boys as in the previous cases i.e., a sex difference in favour of boys exists only in the Average and Low Social Skills Attainment Group.

4. Determination of the association between Parental Involvement in the education and management of MR children and their attainment in the six basic skills under study showed that a real association between

the variables exists only in one case viz., Communication Skills, the details of the relationship (χ^2 values) being as follows:

4.1. No real association was found between Parental Involvement and Self-care-skills (χ^2=6.845).

4.2. No real association was found between Parental Involvement and Reading Skills (χ^2=0.5955).

4.3. No real association was found between Parental Involvement and Writing Skills (χ^2=2.656).

4.4. No real association was found between Parental Involvement and Arithmetic Skills (χ^2=5.248).

4.5. A real association was found between Parental Involvement and Communication Skills (χ^2=15.05; $P < .05$).

4.6. No real association was found between Parental Involvement and Social Skills (χ^2=7.511).

5. Determination of the influence of Parental Involvement on the attainment of the six basic skills under study with respect to the mildly retarded children showed that,

5.1. Parental Involvement influences the attainment in Self-care-skills of moderately retarded children only (χ^2=10.326; $P < .05$).

5.2. Parental Involvement does not show any influence on the reading, writing and arithmetic skills of all the three sub-groups of MR children under study.

5.3. Parental Involvement influences the attainment in communication skills of moderately retarded children only (X^2=13.023; $P < .05$).

5.4. Parental Involvement influences the attainment in social skills of mildly retarded children only (X^2=15.175; $P < .01$).

6. Identification of the level of Education of the parents of the MR children showed that majority of the parents under study (52.70%) belong to the low parental education group. The remaining proportion of parents fall in the high parental education group (33.97%) or average parental education group (13.33%).

7. Comparison of the level of attainment of MR children of high and low Parental Education groups with respect to each of the six basic skills under study showed that no significant difference exists between the groups under comparison with respect to the different skills studied, the details of the result of the test of significance being as follows:

7.1. No significant relation was found between the level of education of parents and the attainment in self-care skills (CR=0.84; P >.05).

7.2. No significant relation was found between the level of education of parents and the attainment in Reading skills (CR=0.81; P >.05).

7.3. No significant relation was found between the level of education of parents and the attainment in Writing skills (CR=0.49; P >.05).

7.4. No significant relation was found between the level of education of parents and the attainment in Arithmetic skills (CR=0.47; P >.05).

7.5. No significant relation was found between the level of education of parents and the attainment in Communication skills (CR=0.84; P >.05).

7.6. No significant relation was found between the level of education of parents and the attainment in Social skills (CR=0.84; P >.05).

8. Information collected about the training given to the parents in handling their MR children under study brought out the following findings:

8.1. Regarding Self-management skills, like Toilet training, Tooth brushing, Meal-time behaviour, Grooming, Dressing, Eliminating Self-injurious

behaviour, it was found that all institution (100 per cent) under study offer training to the parents in handling their MR children.

8.2. With respect to Reading ability, the study found that 71.43 per cent of the institution offer training, 'To a great extent' to the parents and 28.57 per cent of the institution offer training, 'To some extent' to the parents under study.

8.3. In the case of Language training, it was noted that 78.57 per cent of the institution provide training to the parents 'to a great extent' and 21.43 per cent of institution provide training 'To some extent' to the parents under study.

8.4. Regarding Arithmetic skills, like Identifying shapes and colour, object matching, counting, it was found that 85.71 per cent of the institution provide training to the parents 'To a great extent' and 14.29 per cent of the institution provide training to the parents 'To some extent'.

8.5. With respect to higher Arithmetic skills, like Addition and subtraction, Monetary skill, the study found that 71.43 per cent of the institution provide training to the parents 'To a great extent' and 28.57 per cent of the institution provide training to the parents 'To some extent'.

8.6. In the case of Communication skills, like picture naming, the study showed that 85.71 per cent of the institution provide training to the parents 'To a great extent' and 14.29 per cent of the institution provide training to the parents 'To some extent'.

8.7. Regarding Social skills, like Social responses and pedestrian skills, the study showed that 78.57 per cent of the institution provide training to the parents 'To a great extent' and 21.43 per cent of the institution provide training to the parents 'To some extent'.

CONCLUSIONS AND SUGGESTIONS

The major conclusions that are arrived at in the study and the suggestions made for improvement are the following:

1. The present study found that only a small proportion (12.06%) of parents under study have high involvement in the education and management of their MR children. This implies that imminent steps should be taken for getting the parents involved in the education and management of their MR children. If parents are given sufficient information regarding the possible ways of getting themselves involved in the education and management of their retarded children, they would obviously do the needful in this respect. Parents

should be made aware of the principles and objectives of the education of the mentally handicapped. They should be well informed as to how they can help their MR children in education and management related aspects. Steps may, therefore, be taken for organizing parental education programmes, which would be helpful in getting maximum parental involvement.

2. Another major finding of the study is that only a small proportion of the MR children under study have high attainment in the six basic skills under study. This finding is not totally contrary to our expectations. One would naturally expect the MR children to perform at a level par below their normal counterparts. However, this does not mean that their performance cannot be improved by all means. One has reasons to believe that higher the level of parental involvement, the better will be the level of skill attainment of MR children. This situation highlights the imperative need for getting maximum parental involvement in the education and management of MR children. All possible steps should, therefore, be taken to help the parents to enable better involvement in the education and management of MR children. Organising adeuate parent training programmes is the imminent need of the hour.

3. Sex differences, in favour of boys, were noted in some of the comparisons made relating to the High, Average and Low groups with respect to the six basic skills under study. In other words, the proportion of boys were higher in some of the skill attainment groups. This situation implies that more care should be taken in making the girls attain the six basic skills discussed earlier. All possible measures should be taken by the authorities concerned for ensuring maximum involvement of parents as well as teachers in the education and management of mentally retarded girls. Adequate programmes should be organized for making parents aware of the crucial need for improving the educational and management conditions of their MR children, particularly girls.

4. Another revealing finding of the study is that a real association is found between Parental Involvement in the education and management of MR children and attainment in only one basic skill viz., communication skills. No real association is found with respect to the other five basic skills under study and parental involvement. One would naturally expect a positive relation between parental involvement and attainment in all the six basic skills under study. A satisfactory explanation for the above finding is

rather difficult. However it should be borne in mind that only a small proportion of the parents under study (12.06%) were found to have high level of involvement in the education and management of their MR children. Moreover it is generally observed that whatever little done for the MR children by way of developing skills is done mainly by the teachers of these children. This situation also highlights the need for taking speedy steps for organising good programmes for the parents of MR children. This also highlights the need for parent counselling which would go a long way in equipping the parents for managing their MR children.

5. The study also found that when the association between parental involvement and attainment in the six basic skills explored further with respect to the three sub-groups of MR children independently, an association was noticed between the variables in two more cases as against the earlier findings with respect to the total group of MR children. A significant association was noticed between Parental Involvement and Self-care-skills of moderately retarded children; Parental Involvement and Communication skills of moderately retarded children; Parental Involvement and Social skills of mildly retarded children.

No significant relationship was noticed between parental involvement and development of the other basic skills under study. This situation suggests that steps should be taken for involving the parents of all the groups of mentally retarded children in the education and management of MR children.

6. The study found that majority of parents of MR children under study (52.70%) belong to the low parental education group. It is further found that no significant difference exists between the MR children of high and low groups with respect to their attainment in the six basic skills under study. This may probably be the result of the fact that the involvement of the parents, whether high educated group or low educated group, in the education and management of MR children is low. This situation warrants the need for taking effective steps for involving parents in the education and management of their MR children. Effective steps, should, therefore, be taken for making the parents involved in the education and management of their MR children. Organising parental awareness education programmes which would be helpful in concentialising the parents about their duties and responsibilities towards their MR children would go a long way in meeting this objective in view.

7. The information collected regarding the training given to the parents in handling their MR children showed that all the institutions under study offer help to parents in self management skills like toilet training, tooth brushing, meal-time behaviour, dressing and grooming. In the case of the development of other skills (Reading, Writing, Arithmetic, Social and Communication skills) the institution vary with respect to the extent of training provided. Attempts are made by the institution for providing training to parents to help their MR children in developing skills essential for daily living. While some of the institution give more emphasis for the development of social skills others give more emphasis for the development of academic skills. However it is generally observed that parents show high interest in participating 'parent training' programmes during the initial period only and loosing interest in it after some time. Steps should, therefore, be taken to motivate the parents to participate in the 'parent training' programmes. Some of the educated parents can be motivated to observe the classroom practices with respect to the development of the different skills in MR children and they can be encouraged to co-operate with the teachers in

handling the classes. These steps would lead to the meaningful realisation of the concept 'Parents are Teachers'.

Educational Implications and Limitations of the Study

The findings of the study would provide a realistic picture about the level of involvement of parents in the education and management of the MR children in Kerala. The study would also help us to decide the association between the level of parental involvement and attainment of MR children in certain basic skills such as self-care, reading, writing, arithmetic, communication and social management. It is hoped that the results of the study would enable us to formulate guidelines for effective parent training programmes for the parents of MR children so that their involvement in the education and management of their MR children can be ensured. The policy makers in the field of special education can also benefit to a great extent from the study.

The study, however, has its own limitations, despite the fact that all possible steps were taken to make the study as reliable and valid as possible. The following

are some of the major limitations that have to be pointed out in this context:

1. A detailed study using separate parental involvement scores for mother and father could not be tried for reasons beyond the control of the investigator. However the data obtained from the parents available were sufficient to provide a true index of the level of involvement of both the parents in the education and management of their MR children.
2. The tools used in the study - The Parent Involvement scale and the Basic skills Attainment Test (BSA-Test) for MR children may have their own limitations. It should be pointed out here that the tests are prepared following the guidelines prepared by experts in the field of special education including the NCERT. All the steps to be followed in tests development of this sort were followed meticulously. As such, it is hoped, that the tools thus prepared were valid instrument for collecting data for the study.

Despite the above limitations it is hoped that the outcomes of the study are valid and generalisable to a great extent and provide fresh insights for further researches.

Suggestions for further research

In the light of the experiences gained from the study, the following are some of the studies suggested for further research:

1. A comparative study of the father and mother involvement in the education and management of the MR children.
2. Relation between parental education and parental involvement in the education and management of the MR children.
3. Influence of socio-economic status on parental involvement in the education and management of MR children.
4. Effect of counselling on parents of MR children.
5. Role of parent training in equipping the parent to manage their MR children.

BIBLIOGRAPHY

Abraham, Mercy (1984). A Study of the Psycho-social Correlates of Mental Health Status of University entrants of Kerala. Ph.D. (Psychology) Thesis, University of Kerala.

Alford, A. (1955). Mental Health despite mental retardation. Lancet, 1, p.1234.

Anderson, S., Mc Gill, C., King, M., Pogue, D., & Taylor, J. (1984). Education for the Trainable Mentally Handicapped Adolescent. Tasa, Vol. 13, No:1.

Anastai, Anne (1955). Psychological Testing. New York: The Mac-Millian Company.

Arjunan, N.K. (1994). A Study of Certain Negative Emotional Experiences of Higher Secondary School Students in relation to their Mental Health Status. M.Ed. Thesis, University of Kerala.

Baig, K. (1983). Home Training of Parents and their TMR Children. Special Education in Canada, Vol. 1. No.1.

Baker, B.L. & Heifetz, L.J. (1976). The Read Project: Teaching manuals for parents of retarded children. In T.D. Tjossem (Ed.). Intervention strategies for high risk infants and young children. Baltimore: University Park press.

Balker, B.L., Brightman, A.J., Heifetz, L.J., & Murphy, D.M. (1976), Peterknoblock (1983). Understanding Exceptional Children and Youth. Little Brown and Co., Boston, Toronto, p.377.

Barlett, K., and Smith, P. (1978). Family Counselling for the handicapped child. Paper presented at the World Congress on Future Special Education, Sterling, Scotland.

Barr, Martin (1904). The Mental Defectives: Their History, Treatment and Training. Philadelphia: Blakiston.

Barsch, R.H. (1968). The parent of the handicapped child: A study of child-rearing practices. In Peterknoblock (1983). Understanding Exceptional Children and Youth. Little Brown & Co., Boston, Toronto, p.370.

Baum, M.H. (1962). Some dynamic factors affecting family adjustment to the handicapped child. Exceptional children, 28: 387.

Beenakumar, S. (1991). Guidance Needs of the parents for the effective management of their mentally retarded children. M.Ed. Thesis, University of Kerala.

Benassi, V.A. & Benassi, B. (1973). An approach to teaching behaviour modification principles to parents. Rehabilitation Literature, 34: 134.

Bereiter, C. & Englemann, S. (1966). Teaching disadvantaged children in the pre-school. Englewood Cliffs, N.J: Prentice-Hall.

Berkowitz, B.P. & Grazrano, A.M. (1972). Training parents as behaviour therapist: a review. Behaviour Research Therapy, 10: 297.

Bernal, M.E. & North, J.A. (1978). A Survey of parent training manuals. Journal of Applied behaviour analysis, 11: 533-544.

Best, John, W. (1977). Research in Education. New Delhi: Prentice-Hall, Pvt., Ltd.

Blatt, A. (1957). Group therapy with parents of severely retarded children: a preliminary report. Group Psychotherapy, 10: 133-140.

Bower, Eli M. (1958). *A Process for early Identification of Emotionally Disturbed Children.* Sacramento: California State Department of Education.

Bowlby, J. (1951). *Child Care and Growth of Love.* Geneva: Penguine Books Ltd.

Bowlby, J. (1968). Effects on Behaviour Disruption of an Affectional Bond. In Thoday, J.M. & Parkes, A.S. (Eds.). *Genetic and Environmental Influences on Behaviour.* Edinburgh: Oliver and Boyd.

Bradshaw, J. & Lawton, D. (1978). Training the causes of stress in families with Handicapped Children, *British Journal of Social Work*, 8 (1).

Bricker, W.A. (1970). Identifying and modifying behavioural deficits. *American Journal of Mental Deficiency*, 75: 16.

Bristol, M.M. & Gallagher, J.J. (1982). *A Family Focus of Intervention, Finding and Educating the High-Risk and Handicapped Infant* (ed). Ramcy and P. Trohanes Baltimore: University Park Press.

Brophy, J.E. (1970). Mothers as teachers of their own pre-school children: The influence of socio-economic status and task structure on teaching capacity. *Child development*, 41: 79-94.

Brophy, J.E., Good, T.L., Nedler, S.E. (1975). *Teaching in the Pre-school.* New York: Harper and Row Publishers.

Casto, G. et. al. (1984). Parent involvement in Infant and Pre-school Programmes. *Journal of the Division of Early Childhood*, 9 (1): 49-56.

Chamberlain, N.H., N.H., and Moss, D.H. (1953). The Three R's concept for the Retarded. New York: *National Association for Retarded Children*, p.6.

Childs, R.E. (1979). A drastic change in curriculum for the educable mentally retarded child. Mental Retardation, 17: 299-301.

Collie, M. (1943). Parent's reaction to diagnosis of mental retardation in their children. Smith Coll. Stud. Soc. Wk, 14: 243-245.

Coughlin, Ellen, W. (1941). Parental attitudes toward handicapped children. Children, 6: 41-45.

Cruick, William, M. (1975). Psychology of Exceptional Children and Youth. New York: Prentice-Hall, INC.

Dalton, Juantia and Epstein, Helene (1963). Counselling parents of mildly retarded children. Soc. Casework, 44: 523-530.

Deb, A.K. (1968). Subnormal Mind. Calcutta: Chakraworthy, Chatterjee and Co. Ltd.

Decker, C.A. & Decker, J.A. (1976). Planning and Administering Early Childhood Programmes, Ohio: C.E. Merrill Publishing Co.

Denhoff, E. & Hyman, I. (1976). Parent Programmes for developmental management. In T.D. Tjossem (Ed.), Intervention Strategies for highrisk infants and young children, Baltimore: University Park Press.

Dharap, N.Y. (1986). An investigation into the problems of the education of the mentally retarded children. Ph.D. (Education) Thesis. Poona University. In M.B. Buch (1991). Fourth Survey of research in education (1983-1988), Vol.2nd Sri Aurobindo Marg, New Delhi: NCERT, p.1329.

Dimicheal, Salvatre, G. (1962). Social and economic effect of mental retardation. Jerome H. and Rothstein. M.R. Reading and Resources. New York: Rinehart and Winston. pp.105-106.

Doll, Edgard, A. (1941). "The Essentials of an Inclusive Concept of Mental Deficiency". American Journal of Mental Deficiency, 46: 214.

Farber, B. (1968). Mental retardation: Its social context and consequences. Boston: Houghton Mifflin. p.27.

Felix, Thomas (1989). The Three C's Concept of Special Education for Mentally Retarded Persons - Approaches, Aspects and Applications. Trivandrum: Central Institute on Mental Retardation.

Fenichel, O. (1945). The psychoanalytic theory of neurosis. New York: W.W.Norton and Co., INC.

Fried, Antoinette (1955). Report of four years of work at the Guidance Clinic for Retarded Children, Essex Country, N.J. American Journal of Mental Deficiency, 60: 83-89.

Gallagher, J. (1956). Rejecting Parents? Exceptional Children, 22, 273-276.

Garrett, Henry, E. (1985). Statistics in Psychology and Education. Bombay: Vakils, Feffer and Simons Pvt. Ltd.

Good, Carter V., & Scates, Douglas E. (1954). The Methods of Educational Research. New York: Appleton Century Crofts, INC.

Grebler, Anne Marie (1952). Parental attitudes towards MR Children. American Journal of Mental Deficiency. 56: 475-483.

Gupta, S.C. and Kapoor, V.K. (1977). Fundamentals of Applied Statistics. New Delhi: Sultan Chand and Son.

Hawkes, Thomas (1992). A Study of Emotions and Social Adjustment of Mentally Retarded Adults. Dissertation Abstracts International, 53 (1): 110-A.

Haynes, V.B. (1976). The national collaborative infant project. In T.D. TJossem (Ed.), Intervention Strategies for high risk infants and young children. Baltimore: University Park Press.

Heifetz, L.J. & Baker, B.L. (1975). Man power and Methodology in behaviour modification: Instructional manuals for the paraprofessional parent. In Manpower and Methodology in behaviour Modification. Symposium presented at the Ninth Annual Convention of the Association for Advancement of Behaviour Therapy, San Francisco.

Hersh, A. (1961). Case-work with parents of retarded children. Social Case work, 6: 61-66.

Hieronymus, A.N., Hoover, H.D. and Lindquist, E.F. (1986). IOWA Test of Basic Skills (Level 6. Form G). Chicago: Riverside Publishing Company.

Hirsch, I. and Walder, L. (1969). Training mothers in groups as reinforcement therapists for their own children. Proceedings of the 77th Annual Convention of American Psychological Association, 4: 561.

Honig, A. and Brill, S. (1970). A Comparative Analysis of the Piagetian Development of Twelve Month old Disadvantaged Infants in an Enrichment Centre with others not in such a Centre. Syracouse University Childrens Centre.

Jangira, N.K. et al. (1990). Functional Assessment Guide: A Handbook for primary teachers. Central Resource Centre, NCERT, New Delhi.

Justice, R.S. et al. (1971). Problems Reported by parents of MR children - who helps? American Journal of Mental Deficiency, 75: 685.

Kanner, Leo A. (1946). Miniature Text Book of Feeble Mindedness. Child Care Monograph, No.1, New York: Child care Publications, pp.8-9.

Kanner, L. (1952). The emotional quandaries of exceptional Children. In Woods School Proceedings, Langhorne, Pa, p.48.

Karnes, M.B., Wollersheim, J.P., Stoneburner, R.L., Hodgins, A.S. & Teska, J.A. (1968). An Evaluation of two pre-school programs for disadvantaged children: A traditional and a highly experimental school. Exceptional Children, 34: 667-676.

Kaushik, Sandhya Singh (1988). Parents are Teachers: A Study in Behaviour Modification of Mentally Subnormals. New Delhi: Northern Book Centre.

Kazdin, A.E. (1973). Issues in behaviour modification with mentally retarded persons. American Journal of Mental Deficiency, 78: 134.

Kean, J. (1975). Successful integration: The Parent's role. Exceptional Parent.

Kirk, S. (1962). Educating Exceptional Children. Boston: Houghton Mifflin Co.

Kirk, S. & Johnson, G.O. (1951). Educating the retarded child. Boston: Houghton-Mifflin.

Klebanoff, L.B. (1959). Parental attitudes of mothers of Schizophrenic, brain-injured and retarded and normal children. American Journal of Orthopsychiat, 29: 445-454.

Kolstoe, O.P. (1976). Teaching educable mentally retarded children. New York: Holt, Rinehart & Winston.

Komala Kumari, T. (1985). A Study of the Organization and Administration of the Institutions for the Mentally Retarded Children in Kerala, M.Ed. Thesis, University of Kerala.

Kozier, Ada (1957). Casework with parents of children born with severe brain defects. Social case work, 38: 183-189.

Knonick, D. (1977). A Parent's Thoughts for Parent and Teachers. In Haring, N.G. & Bateman, B. Teaching the Hearing Disabled Child, Englewood Cliff, N.J: Prentice Hall.

Kramm, Elizabeth, R. (1963). Families of Mongoloid children. Washington: U.S. Government Printing Office, p.48.

Kroth, R.L. (1975). Communicating with Parents of Exceptional children: Improving Parent-Teacher Relationships, Denver: Love.

Latha, K. (1985). Impact of parental attitude on social, emotional and educational adjustment of normal and handicapped students. Ph.D. (Psychology) Thesis. Agra University, cited in M.B. Buch (Ed.) (1991). Fourth Survey of Research in Education (1983-1988). Vol. 2nd. Sri Aurobindo Marg, New Delhi: NCERT, p.1329.

Levinson, Abraham (1955). The MR child. London: George Allen and Unwin Ltd.

Levison, Beatrice (1962). Understanding the child with school phobia. Journal of Exceptional children, 28: 394.

Love, L.R. & Kaswan, J.W. (1974). Troubled Children: Their Families, Schools and Treatments. New York: Wiley.

Lugo, James, O., & Hershey, Gerald, L. (1981). Living Psychology (3rd edn.). New York: Macmillan Publishing Co., Inc.

Lunt, I. & Sheppard, J. (1986). Participating Parents. Leicester: British Psychological Society.

Mac Millan, D.L. (1977). Mental retardation in school and society. Boston: Little, Brown & Company.

Mahoney, S.C. (1958). "Observations Concerning Counselling with Parents of Mentally Retarded Children". American Journal of Mental Deficiency, 63: 81-86.

Mark, Tonsing (1985). Factors in family decision making about placement of developmentally disabled individuals. American Journal of mental deficiency, 89: 352.

Mattson, B. (1977). Involving parents in special education. Did you really reach them? Education and Training of the mentally retarded, 12 (2): 358-360.

Mc Andrew, I. (1976). "Children with a handicap and their families". Child-care health and development, 2: 213-238.

Mc Keith, R. (1973). Parental reaction and responses to a handicapped child. In F. Richardson (ed.) Brain and intelligence. Hyattsville, MD: National Education Consultants, pp.131-141.

Merachnik, D.A. and Quattlebaum, B. (1963). Adaptations and Usage of programmed instruction in arithmetic with mentally retarded. Res. Bull (New Jersy), Sch. Development Council, B. No.2.

Merlene, A.M. (1985). Strategies adopted for teaching the Mentally Retarded Children in the Institutions for the Mentally Retarded in Kerala. M.Ed. Thesis, University of Kerala.

Meyer, D.L., and Perkins, A.L. (1962). The dynamics of genetic counselling. Eugen. Quart. 9: 237-40.

Narayan, Suma (1993). Knowledge, Attitude and Perception of parents of Mentally Handicapped children. The Indian Journal of Social Work, 54 (3): 437-438.

O'Dell, S. (1974). Training parents in behaviour modification: A Review. Psychological Bulletin, 81, 418.

Olshansky, S. (1962). Chronic sorrow: A response to having a mentally defective child. Social case work, 43: 191-194.

Parmelee, A.H. (1959). Attitude study of parents of MR children. Pediatrics, 24: 819-821.

Pascal, C.E. (1973). Application of behaviour modification by parents for treatment of a brain-damaged child. In Asher, B.A. & Poser, E.G. (Eds.). In adaptive learning: Behaviour modification with children. New York: Pergamon Press.

Peck, J.R., & Stephens, W.B. (1960). A Study of the relationship between the attitudes and behaviour of parents and that of their mentally defective child. American Journal of Mental Deficiency, 64: 839-844.

Pinkerton (1970). Parental acceptance of a handicapped child. Developmental medicine and child. Neurology, 12: 207-212.

Preetha, Rajam, R.V. (1987). A Study of the Problems of the Parents of the Mentally Retarded Children in the Institutions in Kerala. M.Ed. Thesis, University of Kerala.

Rinn, R.C. and A. Marble (1977). "Parents Effectiveness Training: A Review", Psychological Reports, 41: 95-109.

Robinson, Halbert B. & Robinson, Nancy H. (1965). The Mentally Retarded Child. New York: Mc Graw Hill Book Company.

Roith, A.I. (1963). The myth of parental attitudes. Journal of mentally subnormal, 9: 51-54.

Ronade, Meena (1977). Parents' role in social integration. IIIrd Asian Conference on Mental Retardation. Bangalore, p.15.

Salzinger, K., Feldman, R.S. & Portnoy, S. (1970). Training parents of Brain-injured children in the use of operant conditioning procedures. Behaviour therapy, 1:4.

Sarason, S. B. (1959). Psychological Problem in Mental Deficiency (3rd edn.). New York: Harper and Bros.

Schild, Sylvia (1964). Counselling with parents of MR Children living at home. Social Work.9: 87.

Solnit, A.J. & Stark, M.H. (1961). Mourning and the Interpretation of Mental Retardation. Paper presented to the American Orthopsychiatrist Association Meeting. Journal of Exceptional Children. 28: 388 & 536.

Spitz, R.A. (1945). Hospitalism: Inquiry into the genesis of psychiatric conditions in early childhood. Psychoanalytic study of the child, 1: 53-74.

Sukumaran, P.S. (1986). A Study of the family environment of the MR children. M.Ed. Thesis, University of Kerala.

Suresh, B. (1989). A Study of the facilities for learning provided to Mentally retarded children at their home. M.Ed. Thesis, University of Kerala.

Thurston, J.R. (1960). Counselling the parents of the severely handicapped. Journal of Exceptional children, 26: 351-354.

Tips, R.L. & Lynch, H.T. (1962). The impact of genetic counselling upon the family milieu. JAMA, 1984, pp.183-186.

Tizard, B. & Hughes, M. (1984). Young Children learning. London: Fontana.

Tredgold, A.F. (1937). A Text-Book on Mental Deficiency. Baltimore: William Wood and Co.

Udayshankar, M.A. (1976). Exceptional children. London: Sterling Publishers Pvt. Ltd.

Vimala, D.M. (1978). An Exploratory study of Exceptional children in the schools of Kerala. M.Ed. Thesis, University of Kerala.

Weber, Elmer, W. (Ed.) (1963). Mental Retarded children and their education. Springfield, Illinois, USA: Charles Thomas Publisher.

Wiegerink, R. & Parish, V.A. (1976). Parent-implemented school program. In D.L. Lillie & P.L. Trohanis (Eds.) (1976). Teaching parents to teach. New York: Walker.

Wikler, L. (1981). Chronic sorrow re-visited: Parents Vs Professional depiction of the adjustment of parents of MR children. American Journal of Orthopsychiatry, 51: 63-70.

Wolfensberger, W. (1983). Normalization - based guidance, education and supports for families of handicapped people. Downsview, Ontario: National Institute on Mental retardation.

Yoshida et al. (1978). Parental involvement in the special education pupil planning process: The schools' perspective. Exceptional children, 44: 531-534.

Zeaman, David & House, Betty, J. (1963). The role of attention in retardate discrimination learning. Norman Ellis (Ed.). Handbook on mental deficiency. New York: New York: Mc Graw-Hill, p.248.

. . . . .

APPENDIX I

PARENT INVOLVEMENT SCALE

By

Dr. (Prof) MERCY ABRAHAM

Department of Education
University of Kerala
Trivandrum

1992

PARENT INVOLVEMENT SCALE

INSTRUCTIONS'

Given below are certain statements which are meant to study the level of parental involvement in the Education and Management of mentally retarded children. Read them carefully and indicate the extent of your involvement as a parent with respect to each of the statements mentioned by putting a tick (✓) mark in the appropriate column against the respective statements Please respond to all the statements

Statement	Father's Mother's Involvement		
	often	some times	never
1) Encouraging the child to brush his/her teeth daily.			
2) Taking care to see that the child washes his/her face when ever necessary.			
3) Seeing that the child washes well after going to the latrine.			
4) Seeing that the child takes his/her bath regularly.			
5) Instructing the child to put on clean clothes after his/her bath.			
6) Developing in the child the ability to differentiate between the right and wrong sides of his/her garments.			
7) Developing in the child the ability to button and unbutton his/her dress			
8) Encouraging the child to comb and keep his/her hair neat.			
9) Making the child wash his hands and mouth before meals.			
10) Training the child to wait till the food is served.			
11) Training the child not to make noise with the vessels while at the dining table.			

Statement	Father's Mother's Involvement		
	often	some times	never
12) Preventing the child from snatching another person's food.			
13) Training the child not to talk while taking food			
14) Training the child not to over eat			
15) Discouraging the child from eating food that had fallen out of his/her plate.			
16) Training the child to wash his vessels clean after each meal			
17) Training the child to clean the table after meals			
18) Training the child to wear his chappals properly.			
19) Seeing that the child keeps his/her nails clean.			
20) Instructing the child to cover his/her mouth while sneezing and coughing			
21) Finding time to make the child familiar with the object in the environment.			
22) Developing the communication skills of the child by making him talk about familiar objects.			
23) Encouraging the child to say the names of his siblings.			
24) Teaching the child to name the numerals in the proper order			
25) Training the child to use his fingers for counting			
26) Training the child to use concrete object for counting			
27) Training the child to deal with the money appropriately.			

Statement	Father's / Mother's Involvement		
	often	some times	never
28) Entrusting some money with the child and making him buy things			
29) Training the child to save money			
30) Helping the child to develop the concept of time.			
31) Training the child to differentiate clearly the different timings of the day (day and night)			
32) Developing in the child the ability to say correctly the month, week, day, date etc			
33) Training the child to use the calendar appropriately			
34) Helping the child to write properly by holding his hand while writing			
35) Encouraging the child to write on his own			
36) Providing congenial atmosphere for facilitating the learning of the child			
37) Finding time to correct immediately the errors made by the child while learning			
38) Making a conscious attempt to correct the child's mistakes without hurting his feelings.			
39) Finding time to teach again at home the lessons taught at school.			
40) Participating in the meetings held to discuss matters relating to the education of mentally retarded children.			
41) Putting into practise the instructions and decisions from the schools for the mentally retarded children.			

Statement	Father's / Mother's Involvement		
	often	some times	never
42) Involving in the activities of Parent Teacher Association of the institution for the mentally retarded children.			
43) Giving opportunities for the child to speak independently on topics that are interesting to him			
44) Informing the teachers concerned about the child's behaviour at home.			
45) Trying to gather information from the teachers concerned regarding the behaviour of the child in the class room			
46) Trying to gain knowledge from teachers regarding the measures to be adopted for solving the behavioural problems of the child.			
47) Holding discussion with teachers concerned, so as to evaluate correctly the potentials of the child			
48) Discussing with the teachers the learning difficulties of the child			
49) Trying to train the child according to the suggestions made by the teachers concerned			
50) Encouraging the child to take part in the cultural and sports competitions held at the schools.			
51) Taking interest in organising the cultural and sports competitions in the schools for the mentally retarded children.			
52) Taking initiative to make the child participate in the cultural and sports competiton held by organisations other than the schools for the mentally retaded children.			
53) Congratulating the child on every success in his studies.			

Statement	Father's / Mother's Involvement		
	often	some times	never
54) Taking initiative to collect periodically all the information relating to the progress of the child			
55) Training the child to do certain excercise in order to over come his physical disabilities			
56) Making the child carryout activities that would help him to attain better hand and legs co-ordination and control.			
57) Finding time to play with the child outside the home in the evening			
58) Consulting a doctor even for the minor ailments of the child			
59 Subjecting the child regularly for medical checkup			
60) Seeing that the child is immunised and vaccinated timely			
61) Seeing that the child's eyesight is tested periodically.			
62 Subjecting the child for a timely check up for assesing hearing ability and any disability associated with it and providing appropriate treatment			
63) Taking care not to talk about the child's disability in his presence.			
64) Discouraging others when they tease the child as 'useless'			
65) Reacting against the other members of the family when they scold the mentally retarded child unnecessarily			
66) Patiently tolerating the mistakes of the child considering the fact that he is disabled			
67) Considering sympathetically the behavioural abnormality of the child			

APPENDIX II

PARENT INVOLVEMENT SCALE (Malayalam Versio

നിർദ്ദേശങ്ങൾ:

മന്ദബുദ്ധിയായ കുട്ടികളുടെ പഠനകാര്യങ്ങളിലും ജീവിതചര്യകളിലും മാതാപിതാക്കൾക്ക് എത്രമാത്രം പങ്ക് വഹിക്കാൻ കഴിയുന്നു എന്നതു മനസ്സിലാക്കുന്നതിനു വേണ്ടിയുള്ള ചില പ്രസ്താവനകളാണ് ചുവടെ കൊടുത്തിരിക്കുന്നത്, ഇവ ശ്രദ്ധാപൂർവ്വം വായിച്ച്, ഇതിൽ ഓരോന്നിനും അച്ഛൻ/അമ്മ എന്ന നിലയിൽ നിങ്ങൾക്ക് എത്രമാത്രം പങ്ക് വഹിക്കാൻ കഴിയുന്നുവെന്നത് സൂചിപ്പിക്കുന്നതിനായി എതിരെ കൊടുത്തിരിക്കുന്ന കോളങ്ങളിൽ ഉചിതമായതിൽ ✓ അടയാളം ഇടുക ദയവുചെയ്ത് എല്ലാ പ്രസ്താവനകൾക്കും ഉത്തരമെഴുതുക.

	പ്രസ്താവന	അച്ഛൻ/അമ്മ എത്രമാത്രം പങ്ക് വഹിക്കുന്നു		
		വളരെയേറെ പങ്ക് വഹിക്കുന്നു	കുറച്ചുമാത്രം പങ്ക് വഹിക്കുന്നു	ഒരുപങ്കും വഹിക്കുന്നില്ല
1	ദിവസവും പല്ലുതേയ്ക്കാൻ കുട്ടിയെ പ്രേരിപ്പിക്കുക			
2	കുട്ടി വേണ്ടപ്പോഴൊക്കെ മുഖം കഴുകുന്നുണ്ടോയെന്ന് ശ്രദ്ധിക്കുക			
3	കക്കൂസിൽ പോകുമ്പോൾ വെള്ളം ഉപയോഗിച്ച് വൃത്തിയാക്കുവാൻ നിഷ്കർഷിക്കുക			
4	കുട്ടി പതിവായി കുളിക്കുന്നുണ്ടോയെന്ന് ശ്രദ്ധിക്കുക.			
5	കുളിച്ചുകഴിഞ്ഞ് വൃത്തിയുള്ള വസ്ത്രം ധരിക്കാൻ കുട്ടിയോട് നിഷ്കർഷിക്കുക			
6	വസ്ത്രത്തിന്റെ അകവും പുറവും സ്വയം തിരിച്ചറിയുന്നതിനുള്ള കഴിവ് കുട്ടിയിൽ വളർത്തിയെടുക്കുക.			
7	ഉടുപ്പിലെ ബട്ടൺ ഇടാനും ഊരാനും ഉള്ള കഴിവ് കുട്ടിയിൽ വികസിപ്പിച്ചെടുക്കുക			
8	മുടിചീകി ഒതുക്കി വയ്ക്കുന്നതിന് കുട്ടിയെ പ്രേരിപ്പിക്കുക			
9	ഭക്ഷണം കഴിക്കുന്നതിന് മുമ്പ് കുട്ടിയുടെ കയ്യും വായും കഴുകിക്കുക			
10	ആഹാരം വിളമ്പിതീരുന്നതുവരെ കാത്തിരിക്കാൻ കുട്ടിയെ പരിശീലിപ്പിക്കുക.			

	പ്രസ്താവന	അച്ഛൻ/അമ്മ എത്രമാത്രം പങ്ക് വഹിക്കുന്നു.		
		വളരെയേറെ പങ്ക് വഹിക്കുന്നു	കുറച്ചുമാത്രം പങ്ക് വഹിക്കുന്നു	ഒരുപങ്കും വഹിക്കുന്നില്ല
11	ഭക്ഷണമേശയിൽ പാത്രങ്ങൾ ഉപയോഗിച്ച് ശബ്ദമുണ്ടാകാതിരിക്കുവാൻ കുട്ടിയെ പരിശീലിപ്പിക്കുക.			
12	മററുള്ളവരുടെ ആഹാരം തട്ടിപറിക്കുന്നതിൽ നിന്നും കുട്ടിയെ പിൻതിരിപ്പിക്കുക			
13	ഭക്ഷണം കഴിക്കുമ്പോൾ സംസാരിക്കാതിരിക്കുവാൻ നിഷ്കർഷിക്കുക			
14	അമിതമായി ഭക്ഷണം കഴിക്കുന്നതിൽനിന്നു കുട്ടിയെ നിയന്ത്രിക്കുക			
15	പാത്രത്തിൽ നിന്ന് പുറത്ത് വീണുകിടക്കുന്ന ആഹാരസാധനങ്ങൾ കഴിക്കുന്നതിൽ നിന്നും കുട്ടിയെ നിരുൽസാഹപ്പെടുത്തുക			
16	ഭക്ഷണം കഴിച്ചുകഴിഞ്ഞ് പാത്രങ്ങൾ വൃത്തിയാക്കി വയ്ക്കുവാൻ കുട്ടിയോട് നിഷ്കർഷിക്കുക.			
17	ആഹാരത്തിനുശേഷം മേശ വൃത്തിയാക്കി വയ്ക്കുവാൻ കുട്ടിയെ പരിശീലിപ്പിക്കുക.			
18	ശരിയായ രീതിയിൽ ചെരുപ്പ് ഇടുവാൻ കുട്ടിയെ പരിശീലിപ്പിക്കുക			
19	കുട്ടി നഖം വൃത്തിയാക്കി സൂക്ഷിക്കുന്നുണ്ടോയെന്ന് ശ്രദ്ധിക്കുക.			
20	തുമ്മുകയോ, ചുമയ്ക്കുകയോ ചെയ്യുമ്പോൾ വായ് മൂടി വയ്ക്കുവാൻ കുട്ടിയോട് നിഷ്കർഷിക്കുക.			
21	ചുററുപാടുമുള്ള വസ്തുക്കളെ കുട്ടിയ്ക്ക് പരിചയപ്പെടുത്തുവാൻ സമയം കണ്ടെത്തുക,			
22	പരിചയമുള്ള വസ്തുക്കളെ കുറിച്ച് കുട്ടിയെകൊണ്ട് സംസാരിപ്പിക്കുന്നതിലൂടെ കുട്ടിയുടെ ആശയ വിനിമയത്തിനുള്ള കഴിവ് വളർത്തിയെടുക്കുക.			

പ്രസ്താവന	അച്ഛൻ/അമ്മ എത്രമാത്രം പങ്ക് വഹിക്കുന്നു		
	വളരെയേറെ പങ്ക് വഹിക്കുന്നു.	കുറച്ചുമാത്രം പങ്ക് വഹിക്കുന്നു	ഒരുപങ്കും വഹിക്കുന്നില്ല
23 സഹോദരങ്ങളുടെ പേരുകൾ പറയുവാൻ കുട്ടിയെ പ്രേരിപ്പിക്കുക.			
24 എണ്ണൽ സംഖ്യകൾ ക്രമത്തിൽ പറയാൻ കുട്ടിയെ പഠിപ്പിക്കുക			
25 കൈവിരലുകൾ ഉപയോഗിച്ച് എണ്ണാൻ കുട്ടിയ്ക്ക് പരിശീലനം നൽകുക			
26 വസ്തുക്കൾ ഉപയോഗിച്ച് എണ്ണാൻ കുട്ടിയെ പരിശീലിപ്പിക്കുക.			
27 നാണയങ്ങൾ ശരിയായി കൈകാര്യം ചെയ്യുവാൻ കുട്ടിയ്ക്ക്പരിശീലനംനൽകുക.			
28 കുട്ടിയുടെ കയ്യിൽ പൈസകൊടുത്ത് സാധനങ്ങൾ വാങ്ങിപ്പിക്കുക.			
29 രൂപ മിച്ചം വയ്ക്കാൻ കുട്ടിയെ പരിശീലിപ്പിക്കുക.			
30 കുട്ടിയെ സമയംനോക്കാൻ പഠിപ്പിക്കുക.			
31 ദിവസത്തിലെ സമയവ്യത്യാസം (രാത്രി/പകൽ) വ്യക്തമായി തിരിച്ചറിയുന്നതിനുള്ള പരിശീലനം നൽകുക.			
32 മാസം, ആഴ്ച, ദിവസം, തീയതി എന്നിവ തെറ്റാതെ പറയുന്നതിനുള്ള കഴിവ് കുട്ടിയിൽ വളർത്തിയെടുക്കുക.			
33 കലണ്ടർ ഉപയോഗിക്കുവാൻ കുട്ടിയെ പരിശീലിപ്പിക്കുക.			
34 കുട്ടിയുടെ കൈപിടിച്ച് ശരിയായ രീതിയിൽ എഴുതാൻ സഹായിക്കുക			
35 സ്വയമായി എഴുതാൻ കുട്ടിയെ പ്രേരിപ്പിക്കുക.			
36 കുട്ടിയുടെ പഠനം സുഗമമാക്കാൻ ആവശ്യമായ സാഹചര്യങ്ങൾ നൽകുക.			

പ്രസ്താവന	അച്ഛൻ/അമ്മ എത്രമാത്രം പങ്ക് വഹിക്കുന്നു		
	വളരെയേറെ പങ്ക് വഹിക്കുന്നു	കുറച്ചുമാത്രം പങ്ക് വഹിക്കുന്നു	ഒരുപങ്കും വഹിക്കുന്നില്ല
37 പഠനസമയത്ത് കുട്ടി വരുത്തുന്ന തെററുകൾ അപ്പോൾതന്നെ തിരുത്തികൊടുക്കുവാൻ സമയം കണ്ടെത്തുക			
38 കുട്ടിയുടെ മനസ്സിന് വിഷമം ഉണ്ടാക്കാതെ അവൻെറ തെററുകൾ മനസ്സിലാക്കി കൊടുക്കുവാൻ ബോധപൂർവ്വം ശ്രമിക്കുക.			
39 സ്ക്കൂളിൽ പഠിപ്പിക്കുന്ന പാഠഭാഗങ്ങൾ വീട്ടിൽ വച്ചും പഠിപ്പിക്കുവാൻ സമയം കണ്ടെത്തുക			
40 മന്ദബുദ്ധികളായ കുട്ടികളുടെ വിദ്യാഭ്യാസപരമായ കാര്യങ്ങൾ ചർച്ച ചെയ്യുന്ന യോഗങ്ങളിൽ സംബന്ധിക്കുക.			
41 മന്ദബുദ്ധികളായ കുട്ടികളുടെ സ്ക്കൂളിൽനിന്നും ലഭിക്കുന്ന നിർദേശങ്ങളും തീരുമാനങ്ങളും പ്രാവർത്തികമാക്കുക.			
42 മന്ദബുദ്ധികളായ കുട്ടികൾക്കുവേണ്ടിയുള്ള സ്ഥാപനങ്ങളിലെ അദ്ധ്യാപകരക്ഷാകർത്തൃ സമിതിയുടെ പ്രവർത്തനങ്ങളിൽ പങ്കെടുക്കുക.			
43 കുട്ടിയ്ക്ക് താൽപര്യമുള്ള വിഷയങ്ങളെ കുറിച്ച് സ്വതന്ത്രമായി സംസാരിക്കാനുള്ള അവസരം കൊടുക്കുക			
44 കുട്ടിയുടെ വീട്ടിലുള്ള പെരുമാററത്തെ പററി അദ്ധ്യാപകർക്ക് അറിവ് കൊടുക്കുക.			
45 കുട്ടിയുടെ ക്ലാസ്സ്മുറിയിലുള്ള പെരുമാററ രീതി അദ്ധ്യാപകരോട് ചോദിച്ച് മനസ്സിലാക്കാൻ ശ്രമിക്കുക			
46 കുട്ടിയുടെ സ്വഭാവ വൈകല്യങ്ങൾ മാററി എടുക്കാനുള്ള മാർഗത്തെക്കുറിച്ച് അദ്ധ്യാപകരിൽ നിന്ന് അറിവ് നേടിയെടുക്കാൻ ശ്രമിക്കുക.			

	പ്രസ്താവന	അച്ഛൻ/അമ്മ എത്രമാത്രം പങ്ക് വഹിക്കുന്നു		
		വളരെയേറെ പങ്ക് വഹിക്കുന്നു.	കുറച്ചുമാത്രം പങ്ക് വഹിക്കുന്നു	ഒരുപങ്കും വഹിക്കുന്നില്ല
47	കുട്ടിയുടെ കഴിവുകളെപ്പററി അദ്ധ്യാപകരുമായി സംസാരിച്ച് ശരിയായി വിലയിരുത്തുക.			
48	കുട്ടിയുടെ പഠനത്തിലുള്ള പ്രയാസങ്ങൾ അദ്ധ്യാപകരുമായി ചർച്ചചെയ്യുക			
49	അദ്ധ്യാപകരുടെ അഭിപ്രായം അനുസരിച്ചുള്ള പരിശീലനം കുട്ടിയ്ക്ക് നൽകാൻ ശ്രമിക്കുക			
50	മന്ദബുദ്ധികളായകുട്ടികളുടെ സ്കൂളിൽ നടക്കുന്ന കലാകായിക മത്സരത്തിൽ പങ്കെടുക്കാൻ കുട്ടിയെ പ്രോത്സാഹിപ്പിക്കുക			
51	മന്ദബുദ്ധികളായ കുട്ടികളുടെ സ്കൂളിൽ നടക്കുന്ന കലാകായിക മത്സരത്തിൽ സംഘാടകരായിരിക്കാൻ താൽപര്യം കാണിക്കുക			
52	മന്ദബുദ്ധികളായ കുട്ടികളുടെ സ്കൂളിനു പുറമേ, മററു സംഘടനകൾ നടത്താറുള്ള കലാകായികമത്സരങ്ങളിൽകുട്ടിയെ പങ്കെടുപ്പിക്കാൻ മുൻകൈ എടുക്കുക			
53	കുട്ടിയുടെ പഠനത്തിൽ ഉണ്ടാകുന്ന ഓരോ വിജയത്തിനും കുട്ടിയെ അഭിനന്ദിക്കുക.			
54	കുട്ടിയുടെ പുരോഗതിയെക്കുറിച്ചുള്ള വിവരങ്ങൾ കാലാകാലം ശേഖരിച്ച് വയ്ക്കുക.			
55	കുട്ടിയുടെ ശാരീരിക വൈകല്യങ്ങൾ തരണം ചെയ്യാൻ സഹായിക്കുന്ന തരത്തിലുള്ള വ്യായാമങ്ങൾ പരിശീലിപ്പിക്കുക			
56	കുട്ടിയുടെ കൈകാലുകളുടെ ശരിയായ ചലനവും നിയന്ത്രണവും ത്വരിതപ്പെടുത്തുന്നതിന് സഹായിക്കുന്ന കളികൾ അവനെകൊണ്ടു ചെയ്യിപ്പിക്കുക.			

പ്രസ്താവന	അച്ഛൻ/അമ്മ എത്രമാത്രം പങ്ക് വഹിക്കുന്നു.		
	വളരെയേറെ പങ്ക് വഹിക്കുന്നു	കുറച്ചുമാത്രം പങ്ക് വഹിക്കുന്നു	ഒരുപങ്കും വഹിക്കുന്നില്ല
57 വൈകുന്നേരം കുട്ടിയോടൊപ്പം വീട്ടിനു പുറത്ത് കളിക്കുവാൻ സമയം കണ്ടെത്തുക			
58 കുട്ടിയുടെ ചെറിയ ശാരീരികാസ്വാസ്ഥ്യങ്ങൾക്ക് പോലും ഡോക്ടറെ കാണിക്കുക			
59 കുട്ടിയെ പതിവായി വൈദ്യപരിശോധനക്ക് വിധേയരാക്കുക			
60 കുട്ടിയ്ക്ക് വേണ്ട രോഗപ്രതിരോധ കുത്തിവയ്പുകൾ യഥാസമയം നടത്താൻ താൽപര്യം കാണിക്കുക			
61 കുട്ടിയുടെ കാഴ്ചശക്തി ഇടയ്ക്കിടെ പരിശോധിപ്പിക്കാൻ കൊണ്ടു പോകുക.			
62 കുട്ടിയുടെ ശ്രവണശക്തിയും അതിനോട് അനുബന്ധിച്ച വൈകല്യങ്ങളും യഥാസമയം കണ്ടുപിടിച്ച് ചികിത്സിപ്പിക്കുക.			
63 മന്ദബുദ്ധിയായ കുട്ടിയുടെമുമ്പിൽവച്ച് അവന്റെ അസുഖത്തെപ്പറ്റി സംസാരിക്കാതിരിക്കുവാൻ ശ്രദ്ധിക്കുക.			
64 കുട്ടിയെ ഒന്നിനും കൊള്ളാത്തവനായി മറ്റുള്ളവർ ആക്ഷേപിക്കുമ്പോൾ അത് നിരുത്സാഹപ്പെടുത്തുക.			
65 വീട്ടിലെ മറ്റംഗങ്ങൾ മന്ദബുദ്ധിയായ കുട്ടിയെ അനാവശ്യമായി വഴക്കുപറയുമ്പോൾ അതിന് എതിരായി പ്രതികരിക്കുക.			
66 കുട്ടിയുടെ വൈകല്യം പരിഗണിച്ച് അവൻ എന്ത് തെറ്റുചെയ്താലും ക്ഷമയോടെ സഹിക്കുക			
67 കുട്ടിയുടെ ഭാഗത്തുനിന്നുള്ള പെരുമാറ്റ വൈകല്യങ്ങൾ അനുഭാവപൂർവ്വം പരിഗണിക്കുക.			

പ്രസ്താവന	അച്ഛൻ/അമ്മ എത്രമാത്രം പങ്ക് വഹിക്കുന്നു		
	വളരെയേറെ പങ്ക് വഹിക്കുന്നു	കുറച്ചുമാത്രം പങ്ക് വഹിക്കുന്നു	ഒരുപങ്കും വഹിക്കുന്നില്ല
68 കുട്ടിയുടെ പെരുമാററത്തിൽ പ്രകടമാക്കുന്ന നിസ്സാരമായ പുരോഗതിപോലും മനസ്സിലാക്കി അത് അഭിനന്ദിക്കുക.			
69 കുട്ടി ചെയ്യുന്ന നല്ല പ്രവർത്തികൾക്ക് അപ്പോഴപ്പോൾ അംഗീകാരം നൽകാൻ ശ്രദ്ധിക്കുക.			
70 കുട്ടി എന്തെങ്കിലും നേട്ടങ്ങൾ കൈവരിക്കുമ്പോൾ ചെറിയ സമ്മാനങ്ങൾ നൽകി അവനെ/അവളെ സംതൃപ്തനാകാൻ ശ്രമിക്കുക.			
71 കുട്ടിയുടെ വിവിധ വൈകാരിക പ്രശ്നങ്ങൾ അദ്ധ്യാപകരുമായിസംസാരിക്കുക			
72 കുട്ടി എന്തു ചോദിച്ചാലും ക്ഷമയോടെ കേട്ട് ഉത്തരം പറയുക.			
73 കുട്ടിയുടെ ക്രീയാത്മകമായ കഴിവുകൾ കണ്ടുപിടിക്കാൻ ആത്മാർത്ഥമായി പരിശ്രമിക്കുക.			
74 കുട്ടിയിൽ പ്രകടമാകുന്ന കഴിവുകൾ വികസിപ്പിച്ചെടുക്കാൻ വേണ്ട നല്ല സാഹചര്യങ്ങൾ സൃഷ്ടിക്കുക			
75 കുട്ടിയുടെ അഭിരുചിക്ക് അനുസരിച്ചുള്ള വർണ്ണകടലാസുകൾ, ചായപെൻസിലുകൾ മുതലായവ വാങ്ങി കൊടുക്കുവാൻ ശ്രദ്ധിക്കുക.			
76 മന്ദബുദ്ധിയായ കുട്ടിക്ക് ഉചിതമായ കളിക്കോപ്പുകൾ വാങ്ങികൊടുക്കാൻ ശ്രദ്ധിക്കുക.			
77 കുട്ടിയുണ്ടാക്കുന്ന വസ്തുക്കൾ എന്തുതന്നെയായാലും അവ വീട്ടിൽ മററുള്ളവർ കാണുന്ന സ്ഥലത്ത് പ്രദർശിപ്പിക്കാൻ ശ്രദ്ധിക്കുക.			
78 ചെറിയ വീട്ടുജോലികൾ ചെയ്യുവാൻ കുട്ടിയ്ക്ക് അവസരങ്ങൾ സൃഷ്ടിക്കുക.			

	പ്രസ്താവന	അച്ഛൻ/അമ്മ എത്രമാത്രം പങ്ക് വഹിക്കുന്നു.		
		വളരെയേറെ പങ്ക് വഹിക്കുന്നു	കുറച്ചുമാത്രം പങ്ക് വഹിക്കുന്നു	ഒരുപങ്കും വഹിക്കുന്നില്ല
79	കുട്ടിയ്ക്ക് കൊടുക്കുന്ന വാഗ്ദാനങ്ങൾ പാലിക്കുവാൻ ശ്രദ്ധിക്കുക			
80	ചെറിയ തെറ്റുകൾക്ക് മന്ദബുദ്ധിയായ കുട്ടിയെ മറ്റുള്ളവർ അമിതമായി ശിക്ഷിക്കുമ്പോൾ, അത് നിരുത്സാഹപ്പെടുത്തുക.			
81	മുതിർന്നവരുടെ സാന്നിദ്ധ്യത്തിൽ തന്നെക്കാൾ പ്രായം കുറഞ്ഞ കുട്ടികളുമായി കളിക്കുവാൻ മന്ദബുദ്ധിയായ കുട്ടിയ്ക്ക് അവസരം നൽകുക			
82	സഹോദരങ്ങളുമായി ഇടപെടാൻ കുട്ടിയ്ക്ക് കൂടുതൽ അവസരങ്ങൾ സൃഷ്ടിക്കുക			
83	കുട്ടി അയൽക്കാരുമായി കൂടുതൽ ഇടപെടാനുള്ള അവസരങ്ങൾ സൃഷ്ടിക്കുക			
84	വീട്ടിൽ ആദ്യമായി വരുന്ന സന്ദർശകരുമായി ഇടപെടാൻ കുട്ടിയെ അനുവദിക്കുക			
85	സ്വന്തക്കാരുടെ ഭവനം സന്ദർശിക്കുമ്പോൾ മന്ദബുദ്ധിയായ കുട്ടിയെ കൂടി കൊണ്ടുപോകുക.			
86	കുട്ടിയെ പൊതുസ്ഥലങ്ങളിൽ കൊണ്ടുപോകുവാൻ താല്പര്യം കാണിക്കുക			
87	കുട്ടിയെ പിറന്നാൾ ദിവസം ആരാധനാലയങ്ങളിൽ കൊണ്ടുപോകുവാൻ ശ്രമിക്കുക			
88	വീട്ടിലെ വിശേഷദിവസങ്ങളിൽ മറ്റുകുട്ടികളെപോലെ സ്വതന്ത്രമായികളിക്കുവാൻ കുട്ടിയെ അനുവദിക്കുക			
89	കുട്ടിയെ ഉല്ലാസയാത്രയ്ക്ക് കൊണ്ടുപോകുക.			
90	കുടുംബത്തിലെ മറ്റ് അംഗങ്ങൾക്ക് അസ്വസ്ഥത സൃഷ്ടിക്കുന്ന പ്രവർത്തികൾ കുട്ടി ചെയ്യുമ്പോൾ അവനെ/അവളെ ശിക്ഷിക്കുക.			

APPENDIX II

MANUAL OF DIRECTIONS FOR PARENT INVOLVEMENT SCALE

by

Dr. (Prof) MERCY ABRAHAM

Department of Education
University of Kerala
Trivandrum
1992

MANUAL OF DIRECTIONS FOR PARENT INVOLVEMENT SCALE

The Parent Involvement scale is a device for measuring the level of parental involvement in the education and management of mentally retarded children. As to its form, the scale consists of 90 statements intended to measure the three components identified as aspects indicating parental involvement viz, Personal care, Educational Care, and Health care (Physical, Mental & Social dimensions).

A three-point response (often, sometimes, never) is possible for the statements, and the responses may be marked on the scale by using tick (√) mark.

The Parent Involvement Score provide us with valuable information regarding the possible ways in which parents can intervene in the matters of their mentally retarded child's development By all the means, the results will serve as a valuable aid in the Guidance and Counselling of parents of mentally retarded children and others who are involved with such children.

DEVELOPMENT OF THE SCALE

The scale was developed following the conventional procedures of test development. The items included in the pretest were 109, the number of items in the three components being 25 (personal care), 38 (Educational care) and 46 (Health care).

The draft scale was administered on a representative sample of 200 parents of mentally retarded Childrenin the institution for the mentally retarded in Kerala. Out of these, 185 response sheets (Just half of the conventional number 370 for item analysis) were used for item analysis. Harper's chart * was used for estimating item descrimination. The items thus selected were used for the final scale.

DIRECTIONS FOR ADMINISTERING THE SCALE

The conditions under which the scale should be administered are, more or less, the same as those which should be observed in giving any test. However, the following points should specifically be borne in mind, while administering the scale.

(i) THE INVESTIGATOR'S PREPARATION.

The investigator should thoroughly familiarize himself with the scale and the Manual of Directions. He should, preferably, try to take the scale himself in a bona-fide manner, so that he can anticipate many of the doubts that can be raised during

---

* A. Edwin Harper, B. Dass Gupta and S. P. Sanyal, Item Analysis chart and Instructions, Delhi. Manasayan. 1962.

the administration of the scale This might help the investigator in foreseeing the problems of administration and prepare himself better for the conduct of the test.

(ii) APPROPRIATE RAPPORT WITH PARENTS BEFORE TEST ADMINISTRATION

The Investigator should make a conscious attempt to establish a proper rapport with the parents, so that the parents, can give their responses without any hesitation or bias

(iii) ENSURE CONFIDENTIALITY

The investigator should explain the purpose of the test to the parents, encourage them to have a positive and co-operative attitude towards the test, stimulate them to put forth genuine responses, and guarantee the confidential treatment of the findings

RELIABILITY AND VALIDITY OF THE SCALE

The scale is found to be reasonably valid and reliable, the details being as follows :

RELIABILITY

The reliability of the final scale was assessed, using the split-half technique. Corrected split-half coefficient calculated for the whole scale was 0.76, which shows that the scale developed is a reliable instrument for measuring parental involvement.

VALIDITY

The different procedure adopted in developing the parent involvement scale, especially the procedure of item selection, could be cited as evidence of the validity of the scale. But these procedures tell us only about the 'construct and 'internal, validity of the scale The external validity of the scale was assessed using 'teacher rating' as external criterion For this, the names of 100 parents of mentally retarded children under study, at random were listed out and given to their class teachers. The teachers were asked to rate the parents on a three point scale with respect to 'parental involvement' (High, Average or Low) and these teacher ratings were converted into scores, using the arbitrary scoring scheme, as shown below:

TEACHER-RATINGS OF THE PARENTAL INVOLVEMENT SCALE

High Parental Involvement	Average Parental Involvement	Low Parental Involvement
3	2	1

The teacher ratings were correlated with the scores on the Parent Involvement Scale, using product moment co-efficient of correlation (r) The correlation between teacher rating and test scores was 0.52, which indicates that the scale developed is a reasonably valid instrument for measuring parental involvement.

DIRECTIONS FOR SCORING

Hand scoring can be done by assigning the appropriate scores for the respective column as shown below

SCORING KEY

High Parental Involvement	Average Parental Involvement	Low Parental Involvement
3	2	1

The total parental involvement score can be obtained by totalling the individual scores assigned for all the 90 items Thus, the minimum and maximum score for the parent involvement scale will be 90 and 270 respectively.

REPORTING AND INTERPRETING THE SCORE

The totalling of the different items in the parent involvement scale yield a total score which is a fairly reliable index of the parental involvement in the education and management of mentally retarded children The High, Average or Low level of involement were interpreted as per the norms given below.

NORMS OF THE SCALE

Norms for the whole scale were determined following the conventional methods* adopted by researchers in the field of psychology and education.

---

* Carl R Rogers, A Test of Personality Adjustment - Manual of Directions, New York Association Press, 1981, p, 11.

The norms for the present scale are based upon a study of parents of 200 mentally retarded children in the institution for mentally retarded in Kerala. The score obtained by an individual can be interpreted with the help of the table of norms provided below

TABLE OF NORMS - CLASSIFICATION OF SCORES ON THE PARENT INVOLVEMENT SCALE

Low Parental Involvement	Average Parental Involvement	High Parental Involvement	Mean N=200
Below 184	184-249	250 or above	216-84

APPENDIX III

BASIC SKILLS ATTAINMENT TEST (BSA-TEST) FOR MENTALLY RETARDED CHILDREN

(Parts A, B, C, D, E & F)

By

Dr. (Prof.) MERCY ABRAHAM

Department of Education
University of Kerala
Trivandrum

1992

INSTRUCTIONS

Below given are some items for assessing the basic skills of mentally retarded children The 'method' and 'evaluation' to be followed for assessing each of the six basic skills is noted against the respective skills Kindly read the method and observe the child carefully before making final assessment with respect to each of the skills to be assessed Mark your answer in the appropriate column against each item.

SKILL	METHOD	EVALUATION

PART A

Self - Care Skills

1	You may see if the child brushes teeth himself / herself.	Yes	No
2	You may see if the child washes hands and face independently	Yes	No
3	You may see if the child asks to go to the toilet	Yes	No
4	You may see if the child goes to toilet independently	Yes	No
5	You may see if the child washes self and dresses	Yes	No
6	You may see if the child washes self and dresses unaided after toileting	Yes	No
7	You may see if the child is able to name items used for personal hygiene such ae soap, deodorant	Yes	No
8	You may see if the child bathes self independently	Yes	No
9	You may see if the child faces problems in undressing himself / herself	Yes	No
10	You may see if the child can button / un button his / her clothes	Yes	No
11	You may see if the child combs his / her hair	Yes	No
12	You may see if the child is able to drink by himself / herself	Yes	No

SKILL	METHOD	EVALUATION	
13	You may see if the child is able to eat by himself / herself	Yes	No
14	You may see if the child has incidents of wetting or soiling his / her clothes	Yes	No
15	You may see if the child is able to walk independently	Yes	No
16	You may see if the child is able to walk upstairs independently	Yes	No
17	You may see if the child avoids dangers such as obstacles while walking	Yes	No
18	You may see if the child goes to the neighbouring house and comes back (unsupervised)	Yes	No
19	You may see if the child crosses streets (unsupervised)	Yes	No
20	You may see if the child uses public transport independently	Yes	No

PART B

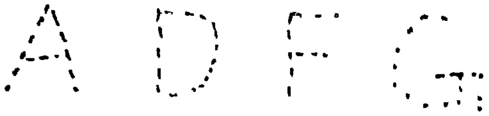
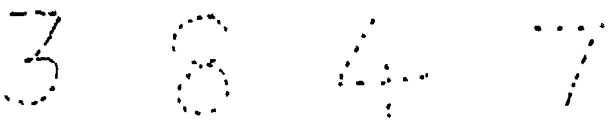
Reading Skills

1	You may ask children to match letters from the BSA-kit as shown below :	Yes	No

A A
C C
D D
E E

2	You may ask children to match letters from the BSA-kit as shown below ,	Yes	No

അ അ
വ വ
പ പ
ത ത

SKILL	METHOD	EVALUATION	
	3 You may ask children to match figures from the BSA-kit as shown below . 1 1 3 3 5 5 7 7	Yes	No
	4 You may see if the child is able to identify and guess the complete form from the given suggestive incomplete clues 	Yes	No
	5 You may see if the child is able to identify and guess the complete form from the given suggestive incomplete clues 	Yes	No
	6 You may see if the child is able to identify and guess the complete form from the given suggestive incomplete clues 	Yes	No
	7 You may ask children to match words from the BSA - Kit as shown below : പാവ പാവ പറവ പറവ വര വര വാര വാര	Yes	No

SKILL	METHOD	EVALUATION	
8	You can see if the child is able to read the words shown below .	Yes	No

പാവ, പറവ, വര, വാര

SKILL	METHOD	EVALUATION	
9	You may ask children to read the numbers up to 20	Yes	No
10	You may ask children to read the alphabet from A to Z	Yes	No
11	You can see if the child is able to read the words shown below .	Yes	No

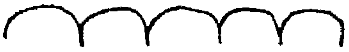
STOP, DANGER, POISON

SKILL	METHOD	EVALUATION	
12	You may ask children to read his / her name	Yes	No
13	You may see if the child can read his / her own address	Yes	No
14	You may see if the child can read the names of family members	Yes	No
15	You may see if the child can read the names of class mates	Yes	No

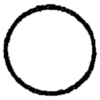
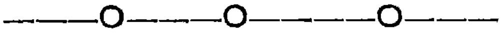
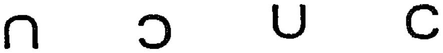
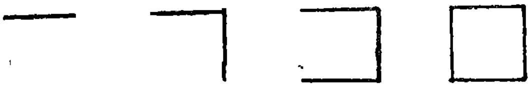
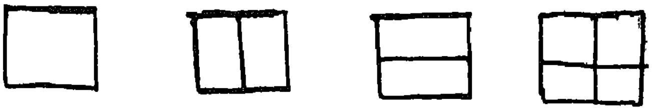
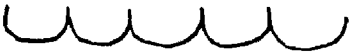
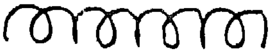
PART C

Writing Skills

SKILL	METHOD	EVALUATION	
1	You may see if the child is able to copy the illustration given below	Yes	No



SKILL	METHOD	EVALUATION	
2	You may ask the child to draw a line as shown below :	Yes	No

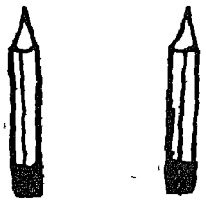
SKILL	METHOD	EVALUATION	
	3 You may ask the child to copy a circle as shown below ·	Yes	No
			
	4 You may see if the child can copy the following illustration	Yes	No
			
	5 You may ask the child to draw the illustration given below :	Yes	No
			
	6 You may see if the child is able to copy the illustration given below :	Yes	No
			
	7 You may ask the child to copy the figure given below :	Yes	No
			
	8 You may see if the child is able to copy as shown below :	Yes	No
			
	9 You may ask the child to copy the figure shown below :	Yes	No
			

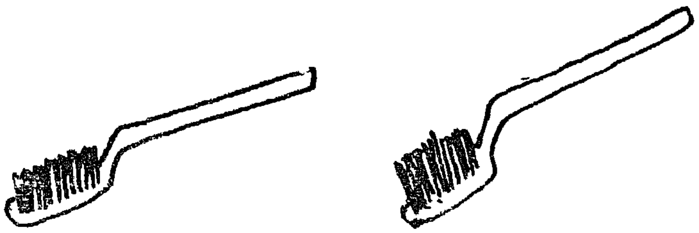
SKILL	METHOD	EVALUATION	
10	You may ask the child to copy the following alphabet റ ന ത ട ഗ ശ	Yes	No
11	You may see if the child can write his / her name	Yes	No
12	You may see if the child can write his / her address	Yes	No
13	You may see if the child can write the names of his / her family members	Yes	No
14	You may see if the child can write the names of his / her friends	Yes	No
15	You may see if the child can write numbers up to twenty five when dictated	Yes	No

PART D

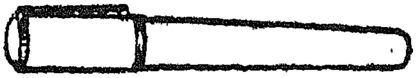
Arithmetic Skills

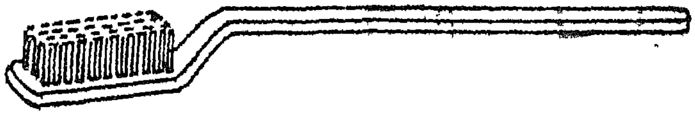
1	You may see if the child is able to match similar objects as shown below :	Yes	No



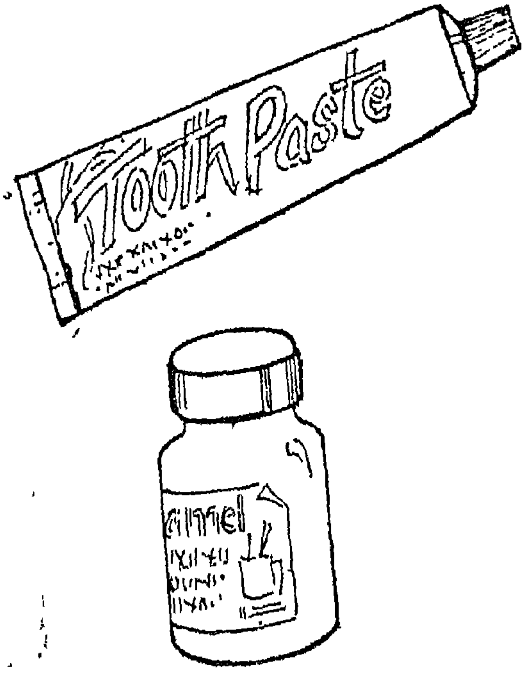


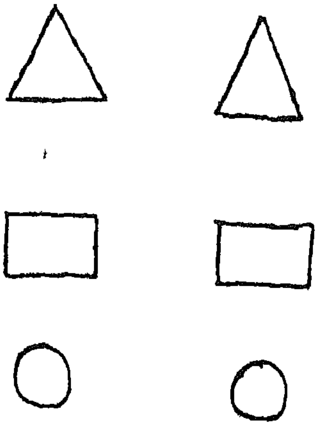
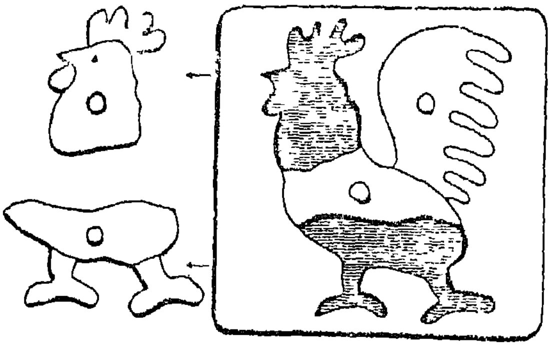
SKILL	METHOD	EVALUATION	
		Yes	No
	2 You may see if the child is able to identify familiar objects as shown below		





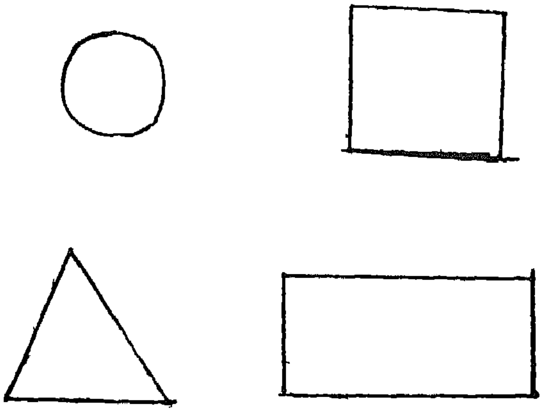
SKILL	METHOD	EVALUATION	
		Yes	No
	3 You can see if the child is able to match objects with picture of same objects as shown below		



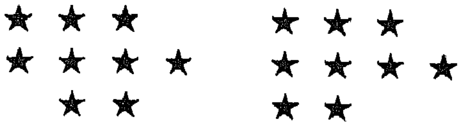
SKILL	METHOD	EVALUATION	
	4 You can see if the child is able to match identical figure from figures provided in the BSA-kit which are similar to the illustration given below 	Yes	No
	5 You may see if the child is able to match colours	Yes	No
	6 You may see if the child is able to see relationship between the part so that they form a complete, meaningful whole For example, children can be asked to fit in the pieces of a puzzle The figures below illustrates such puzzles 	Yes	No
	7 You may see if the child is able to identify colours. You may point to different colours and ask the child to name them	Yes	No

SKILL METHOD EVALUTION

8 You can see if the child is able identify and name the basic shapes for example, circle, square, triangle and rectangle as shown below · Yes No



9 You may ask children to match equal numbers with the help of objects as shown below Yes No



10 You may ask children to match numbers Yes No

11 Children may be asked to pick up specified numbers of objects Yes No

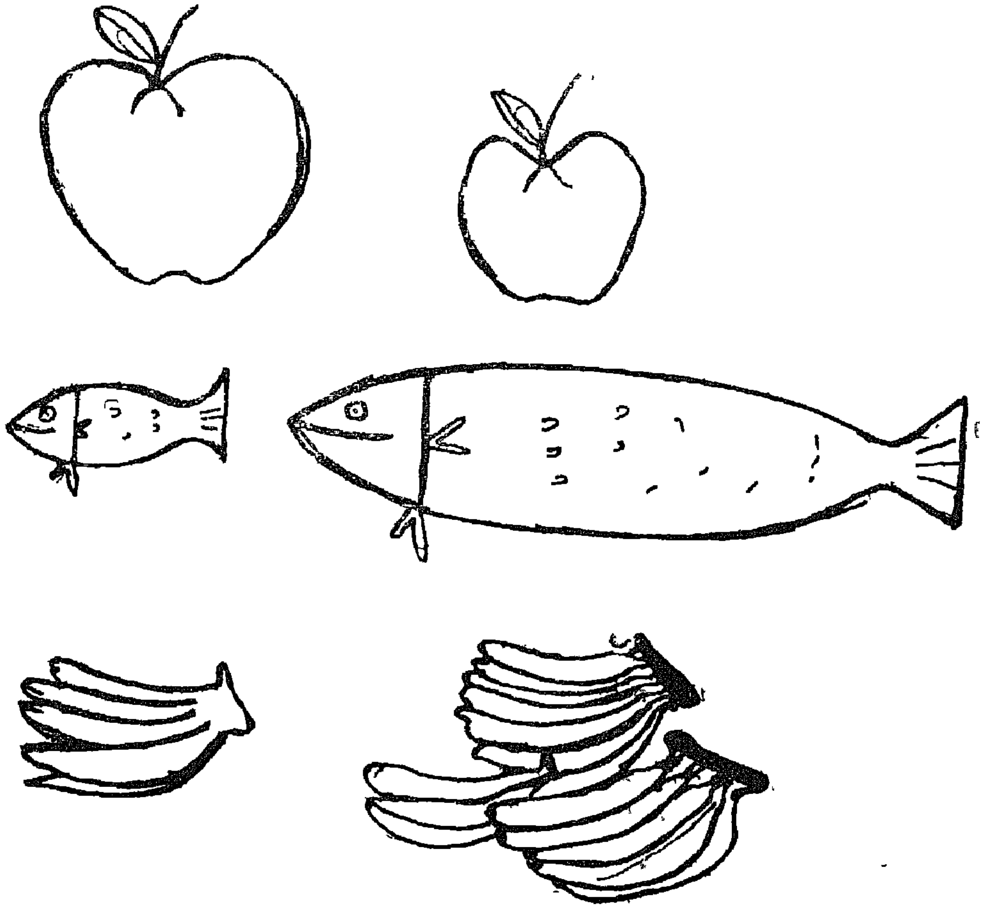
12 Ask children to count by rote 1 to 10 Yes No

13 Ask children to name the numerals 1 to 10 Yes No

14 Place object s of same shape serially and ask children to identify the position of objects (second, third, fifth) Yes No

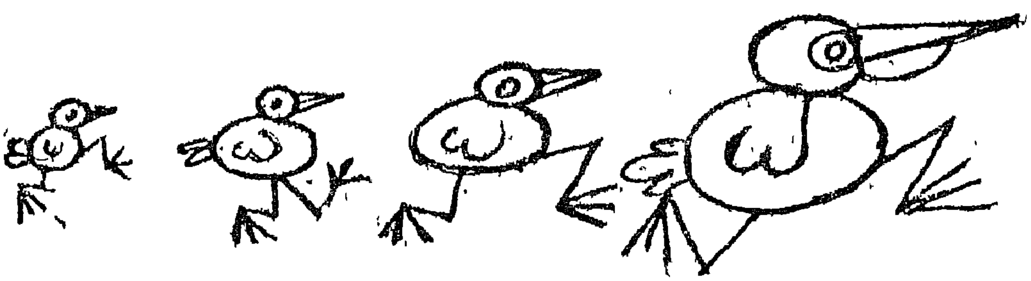
15 You may see if the child under stands concepts of big and small, long and short, few or many. In the following illustration you may ask the child to point to big or small, long or short, few or many

Yes No

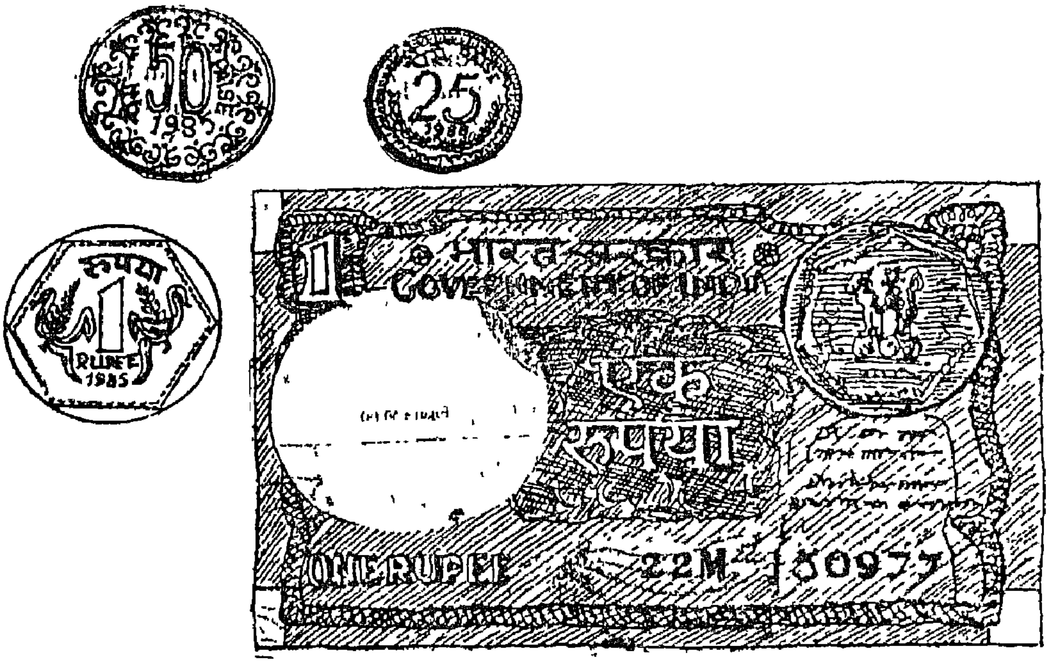


16 You may ask children to grade objects according to size

Yes No

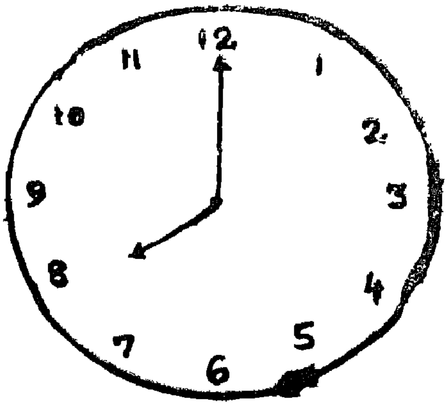


17 You may see if the child is able to name coins and currency notes as shown below — Yes — No

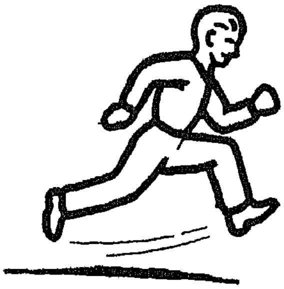


18 You may see if the child understands the value of money — Yes — No

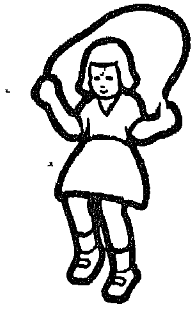
19 You can ask children to tell the position of long and short arms in a clock The clock provided in the BSA - Kit can be used for this purpose — Yes — No



SKILL	METHOD	EVALUATION	
20	You can see if the child can tell his / her daily schedule of activities in a proper sequence and name the time of the day	Yes	No
PART E			
Communication skills			
1	You may see if the child responds to sounds	Yes	No
2	You may see if the child responds to gestures	Yes	No
3	You may see if the child follows instructions such as 'go and get me a chalk box'	Yes	No
4	You may see if the child can name objects in her / his immediate environment such as chair, table, board etc when asked	Yes	No
5	You may see if the child is able to tell her / his name correctly	Yes	No
6	You may ask children to name common objects when shown	Yes	No
7	You may see if the child is able to points familiar objects when asked	Yes	No
8	You may see if the child is able to name his / her body parts	Yes	No
9	You may see if the child is able to identify the action of people, shown below, by using verbs.	Yes	No



run



jump

SKILL	METHOD	EVALUATION	
10	You may see if the child is able to identify his / her belongings	Yes	No
11	You may see if the child is able to indicates food items	Yes	No
12	You may see if the child is able to use appropriate word for toileting	Yes	No
13	You may present to the child some objects and ask his / her 'what is this'	Yes	No
14	You may present picture of common objects, see if the child is able to recognize the picture when described by its use	Yes	No
15	You may see if the child is able to identify his / her sex	Yes	No
PART F			
Socialskills	You may observe whether the child exhibits the following behaviours :		
1	Respond to smile / laughter with similar behaviour	Yes	No
2	Responds to own name	Yes	No
3	Takes part in a game with another child	Yes	No
4	Plays co-operatively with others	yes	No
5	Follow rules in a group game	Yes	No
6	Chooses own friends	Yes	No
7	Shares object when requested with another child.	Yes	No
8	Greet others	Yes	No
9	Makes a choice when asked (favourite toy / food / dress)	Yes	No
10	Helps in domestic tasks	Yes	No
11	Takes on minor responsibilities	Yes	No
12	Carries out routine tasks by himself	Yes	No
13	Repeat rhymes, songs and dances with others	Yes	No
14	Goes on simple errands out side the house and school	Yes	No
15	Makes minor purchases	Yes	No

NATURE AND PURPOSE OF THE TEST

The Basic Skills Attainment Test (BSA-Test) for mentally retarded children is a device to assess the level of attainment of mentally retarded children in six basic skills viz , self-care skills Reading skills, Writing skills, Arithmetic skills, Communication skills and Social skills As to its form, the test consists of 100 items in six parts (Parts A, B, C, D, E & F) which are meant to measure the six basic skills mentioned above, the number of items in the different sections being as shown below:

Part A :	Self-care skills	- 20 items
Part B :	Reading skills	- 15 items
Part C :	Writing skills	- 15 items
Part D :	Arithmetic skills	- 20 items
Part E :	Communication skills	- 15 items
Part F	Social skills	- 15 items

A Basic skills Attainment Kit (BSA-Kit) consisting of blocks, pictures, photos, flash cards, real objects like pen, pencil, coins, notes, chalk, brush and comb is used for facilitating assessment of the different skills mentioned.

The test scores provide us with valuable information regarding the level of attainment of the mentally retardeded children in the basic skills to be attained By all means, the test results will serve as a valuable aid in the field of Special Education.

DEVELOPMENT OF THE BSA-TEST

The test was developed, following mainly the guidelines provided in the 'Functional Assessment Guide' developed by the National Council of Educational Research & Training (NCERT), New Delhi (Jangira et al , 1990)[1] and the guidelines prepared by the National Institute for the Mentally Handicapped (NIMH), Hyderabad IOWA Test of Basic Skills prepared at the University of IOWA was also helpful in this context (Hieronymus et al, 1986).[2]

The draft items were shown to teachers and experts in the field of special education and their suggestions were considered for selecting, revising and editing of items. The draft test consisting of 145 items was administered on a representative sample of 200 mentally retarded children in the institutions for the mentally retarded in Kerala to decide the suitability of items for measuringthe different skills

---

1 Jangira, N K. et al, (1990) **Functional Assessment Guide : A Hand book for Primary Teachers.** Central Resource Centre, NCERT, New Delhi.

2 Hieronymus, A N , Hoover, H D. and Lindquist, E F. (1986). **IOWA Test of Basic Skills (Level 6 Form G).** Chicago: Riverside Publishing Company.

The test scores were used for determining the item discrimination. For the final test, 100 items representing the six basic skills were selected, the details being as shown earlier.

DIRECTIONS FOR ADMINISTERING THE TEST

While administering the test, the following points should be borne in mind :

1 The test administrator should thoroughly familiarize himself/herself with the test and the Manual of Instructions. He should, preferably try to administer the test on one or two children, so that he can anticipate any problem that may arise during the administration of the test.

2 Proper rapport should be made with the mentally retarded children so as to develop in them a co-operative attitude towards taking the test.

3 Disturbances are to be avoided at all cost, since the span of attention of mentally retarded children is low

4 The co-operation of the class teachers should be sought in the administration of the tests, so that test administration would be easier in the presence of the class teachers, who are more familiar to the mentally retarded children.

5 There is no time-limit for the test The test should be administered individually to each child and assessment should be made on the spot in the appropriate coloumns provided for each item

RELIABILITY AND VALIDITY OF THE BSA-TEST

RELIABILITY

The reliability of the BSA-Test was assessed using the Test Retest method (Anastasi · 1955, pp 105-106) [1] The test was administered twice on fifty mentally retarded children with an interval of one month in between The test scores were used for calculating the reliability co-efficient The reliability co-efficient in this case is simply the correlation of the scores obtained by the same subjects on two administrations of the test The reliability of the test was calculated by using the formula suggested by Garrett (1985, pp. 138-139) [2]. The 'r' values obtained for the whole test and for the component tests are given below .

---

[1] Anne Anastasi (1955). **Psychological Testing.** New York · The Mac-Millian Company, pp 105-106

[2] Henry E. Garrett (1985) **Statistics in Psychology and** Education. Bombay : Vakils, feffer and Simons, pp 138-139.

TEST-RETEST RELIABILITY COEFFICIENTS FOR THE BSA-TEST

BSA-Test Components	Corrected Value of reliability co-efficients
Whole test	0.64
PART A: Self-care skills	0.69
PART B: Reading skills	0 67
PART C: Writing skills	0 61
PART D: Arithmetic skills	0.64
PART E: Communication skills	0 65
PART F: Social skills	0 63

The values quoted above show that the test developed is a reasonably reliable instrument for assessing the attainment of basic skills in mentally retarded children.

VALIDITY OF THE BSA-TEST

The different procedures adopted in developing the BSA-Test, particularly the procedure of item selection, could be cited as evidence of the 'internal' validity of the test The 'external' validity of the test was established by using 'teacher rating' as an 'external' criterion The teachers were asked to rate the mentally retarded children on a three point scale (High, Average, Low), with respect to each of the basic skills mentioned earlier and the ratings were converted into scores using an arbitrary scoring scheme The scores thus obtained by teacher rating were correlated with the scores obtained by the children in the administration of the BSA-Test. The correlation co-efficients obtained between teacher rating and the test scores are presented below.

CORRELATION CO-EFFICIENTS BETWEEN TEACHER RATING AND THE SCORES ON BSA-TEST

Test Components	Correlation Co-efficients
Whole test	0 52
PART A. Self-care skills	0 54
PART B: Reading skills	0 52
PART C: Writing skills	0 50
PART D: Arithmetic skills	0 51
PART E: Communication skills	0 53
PART F: Social skills	0 54

The above values show that the test developed is a reasonably valid instrument for assessing the basic skills of mentally retarded children.

DIRECTIONS FOR SCORING

Hand scoring can be done accurately, assigning one point credit to each 'Yes' answer The score for each sub-test is the number of 'Yes' answers for that particular sub-test. The sum of the scores on the sub-tests yield the total score for the whole test.

REPORTING AND INTERPRETING THE SCORE

Analysis of the test scores yield six different scores as the following·

1 Self-care skills score-indicates the level of attainment of mentally retarded children in Self-care skills.

2 Reading skills score - indicates the level of attainment of mentally retarded children in Reading skills.

3 Writing skills score - indicates the level of attainment of mentally retarded children in Writing skills

4 Arithmetic skills score - indicates the level of attainment of mentally retarded children in Arithmetic skills.

5 Communication skills score - indicates the level of attainment of mentally retarded children in Communication skills

6 Social skills score - indicates the level of attainment of mentally retarded children in Social Skills.

NORMS OF THE SCALE

The table provides the details to be observed in following the norms and interpreting the scores.

TABLE OF NORMS-CLASSIFICATION OF SCORES BASED ON BSA-TEST

	Low	Average	High	Mean (N=200)
Self-care skills	Below 11	11-16	17 or above	14 25
Reading skills	Below 6	6-11	12 or above	9.06
Writing skills	Below 7	7-12	13 or above	10.37
Arithmetic skills	Below 9	9-15	16 or above	13 26
Communication skills	Below 8	8-13	14 or above	11.26
Social skills	Below 7	7-13	14 or above	10.72

APPENDIX V

General Data Sheet for Mentally Retarded Children

1. Name of the child : Male/Female

2. Name of the institution :

3. Locality : Urban/Rural

4. Type of institution : Residential / Non-residential/ Residential-cum-Day-centre

5. Level of mental retardation : Mild / Moderate / Severe

APPENDIX VI

GENERAL DATA SHEET FOR PARENTS

1. Name and address of the parent : Male/female

2. Name of the child and the institution :

3. Locality : Rural/Urban

4. Educational Qualifications :

5. Occupation :

6. Monthly income : Rs.

INTERVIEW SCHEDULE (for teachers)

1. Name Male/Female

2. Age Religion: Caste:

3. Educational Qualifications:

4. Details of special training in teaching the mentally retarded, if any (give details)

5. Total teaching experience:
   a. in institution for mentally retarded
   b. in other institution (if any)

6. Name and other details of the school working at present:

7. Reasons for choosing the present occupation:

8. Extent of interest in the present job: To a great extent/ To some extent/ Not at all

9. Opinion regarding the level of parental involvement in the education and management of mentally retarded children (Please express your opinion with respect to each of the student in your class in the additional sheet provided, giving the names of students) High/Average/Low

10. Opinion regarding the level of attainment of mentally retarded children in the following six basic skills (using the list of students provided separately, indicate the level of attainment of each student in your class).

Basic skills	Level of attainment High/Average/Low
1. Self-care skills	
2. Reading skills	
3. Writing skills	
4. Arithmetic skills	
5. Communication skills	
6. Social skills	